JORGAN V3.20 INSTALLATION AND THE "CHRISTIE" DISPOSITION

Abstract

This document is a step by step guide to installing jOrgan V3.20 64bit on a Windows 8 64bit PC environment, with the 64 bit Port Audio WASAPI extension.
(Everything will also relate to Windows 7 64bit just may look slightly different)
Then loading the "Christie" disposition and making important initial settings and configuration tips &tricks.
It is not as complex as the number of pages might suggest. There are a lot of screen images so you can see every step.
Revision 04

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Downloading Required Packages

REQUIRED FILES

To run jOrgan on your computer you will need two free software packages available on the internet. In this tutorial, we will also install a third item of free software to provide improved audio response-time and clarity.

1. jOrgan installer package
2. Java Runtime Environment (JRE).
3. Fluidsynth Port Audio – WASAPI patch.

VERSIONS

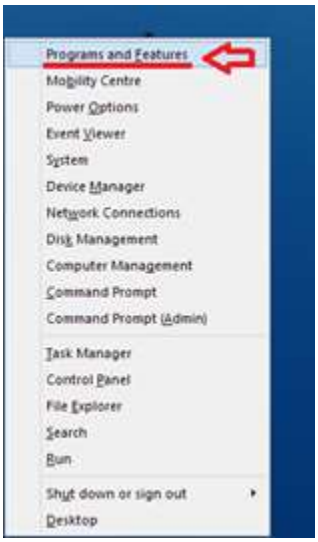
At the time of writing this document, the stable release version number of each package is as follows, we are also going to use the 64-bit version of each and it is crucial to keep them all the same "bit".

- jOrgan version 3.20 installer amd64.
- Java 7 update 55 (64-bit)
- Fluidsynth1.1.6.dsound.portaudio.WASAPI.a64-1.5

CHECK YOUR SYSTEMS REQUIREMENTS

Many other programs including web browsers use Java Runtime Environment. Before installing, check that you do not already have it, or an earlier version.

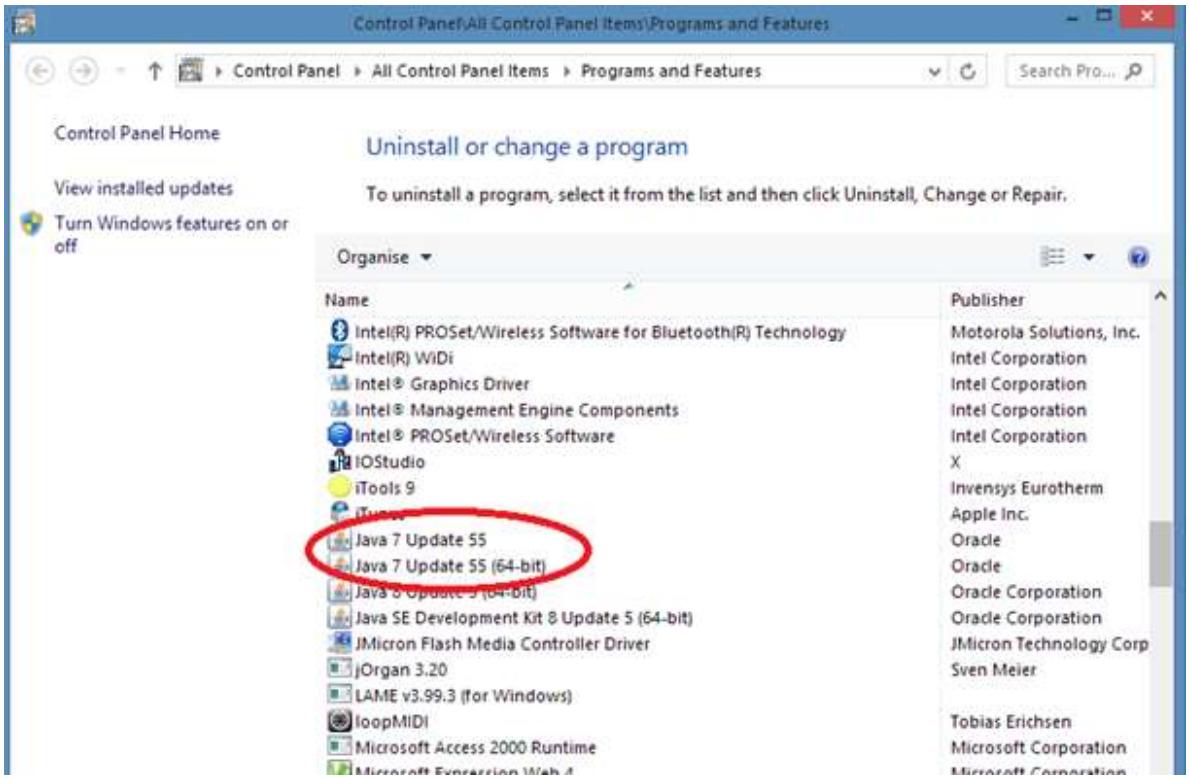
In Windows 8, press the Windows key + the "X" key.



DOWNLOADING REQUIRED PACKAGES

Now click on Programs and Features, *(or press "F" key shortcut underlined in the name)*

You will see a list of the programs installed on your computer. Scroll down the list alphabetically to programs starting with "J".



Check to see if you already have Java 7 Update 55 (64-bit). The 64-bit part is important for this task.

> *If you also have another Java without 64-bit, that is ok to keep along with the 64-bit version.*
>
> *If you have an older version. Click on it and select "Uninstall" before installing the current version.*

FINDING THE REQUIRED FILES

The three file packages needed for this task are available free on the internet. As links can often change *(as newer versions are released)* I will show you screen shots of where to go on the web pages as well as the current direct links.

DOWNLOADING REQUIRED PACKAGES

JAVA

If you type java into your web search engine, you will find this page. http://www.java.com/en/

Click on “Download” in the heading. *(Do not click the obvious button in the middle of the page!)*

On this next page at the center near the bottom of the page, click on “See all Java downloads”

(Again, do not click on the obvious red button!)

DOWNLOADING REQUIRED PACKAGES

Click on “Windows Offline (64-bit)”.
http://javadl.sun.com/webapps/download/AutoDL?BundleId=87443

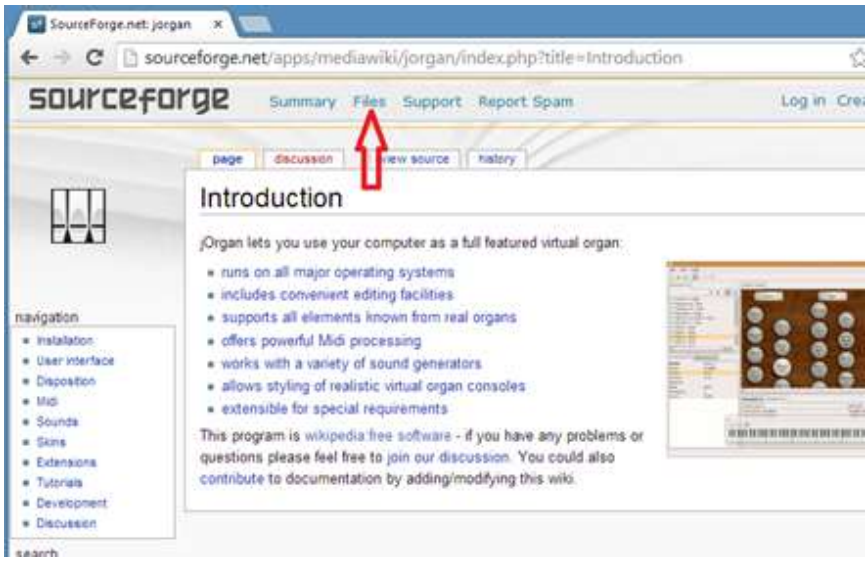
The file will immediately start to download.

(Or you may be asked where you would like to save the file depending on your browser settings!)

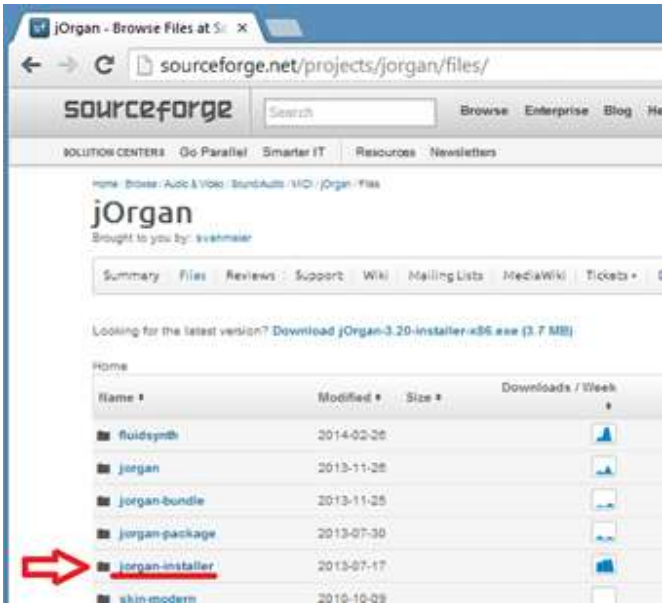
DOWNLOADING REQUIRED PACKAGES

JORGAN

Typing jOrgan into your web search engine should get you here:
http://sourceforge.net/apps/mediawiki/jorgan/index.php?title=Introduction



Click on “Files”

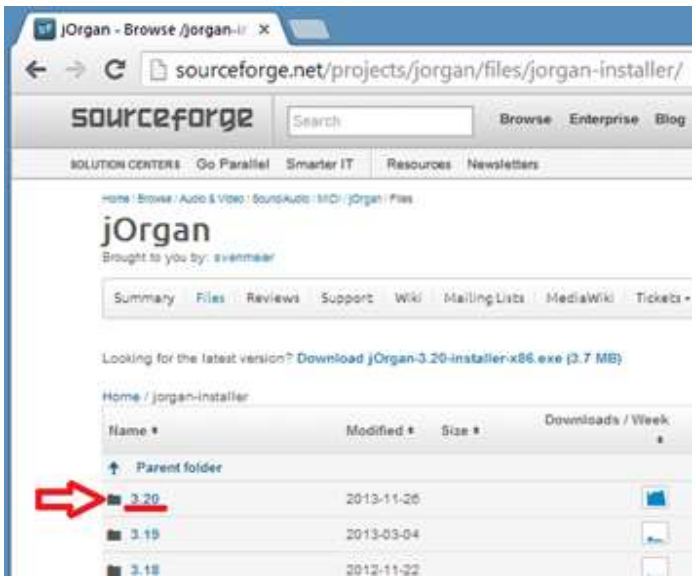


Then click on the “jorgan-installer” link.

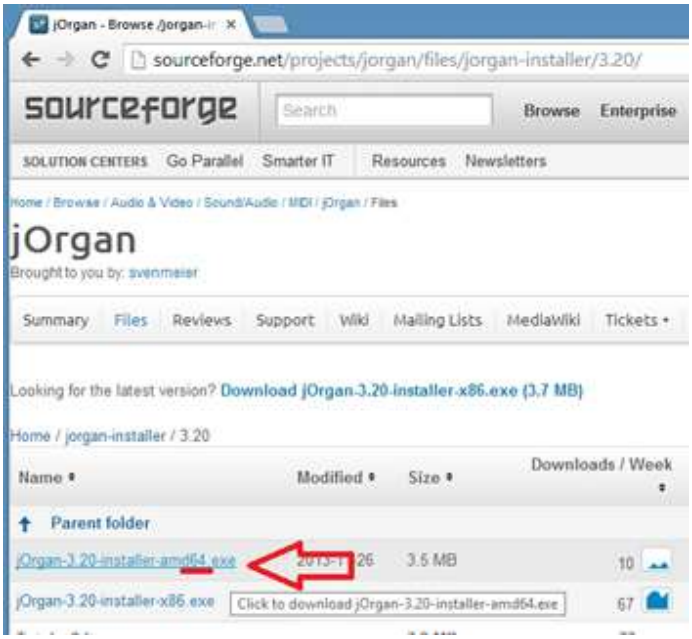
(Do not click on the more obvious link above the table headings; it is the x86 32-bit version!)

DOWNLOADING REQUIRED PACKAGES

You will now see:



Click on “3.20”



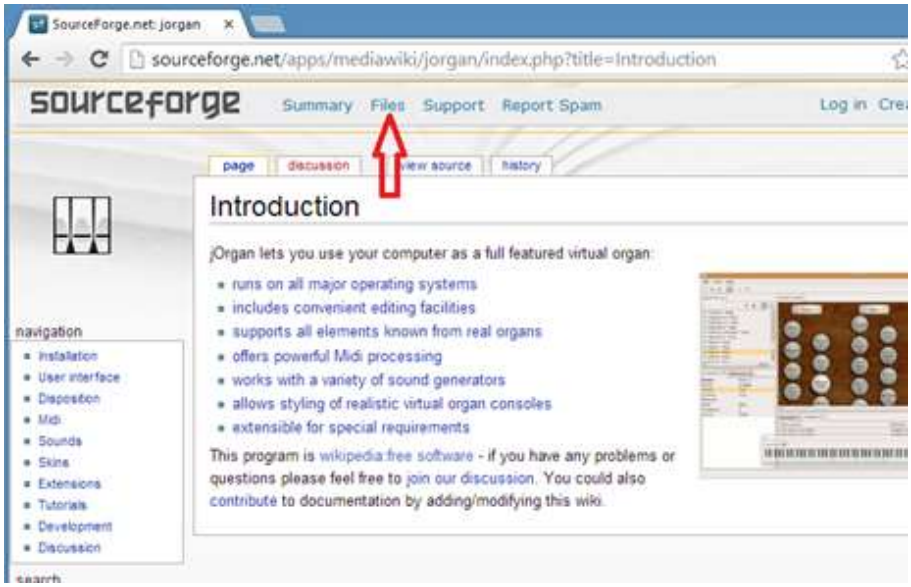
Now we have reached our target. Click on “jOrgan-3.20-installer-amd64.exe”

http://sourceforge.net/projects/jorgan/files/jorgan-installer/3.20/jOrgan-3.20-installer-amd64.exe/download

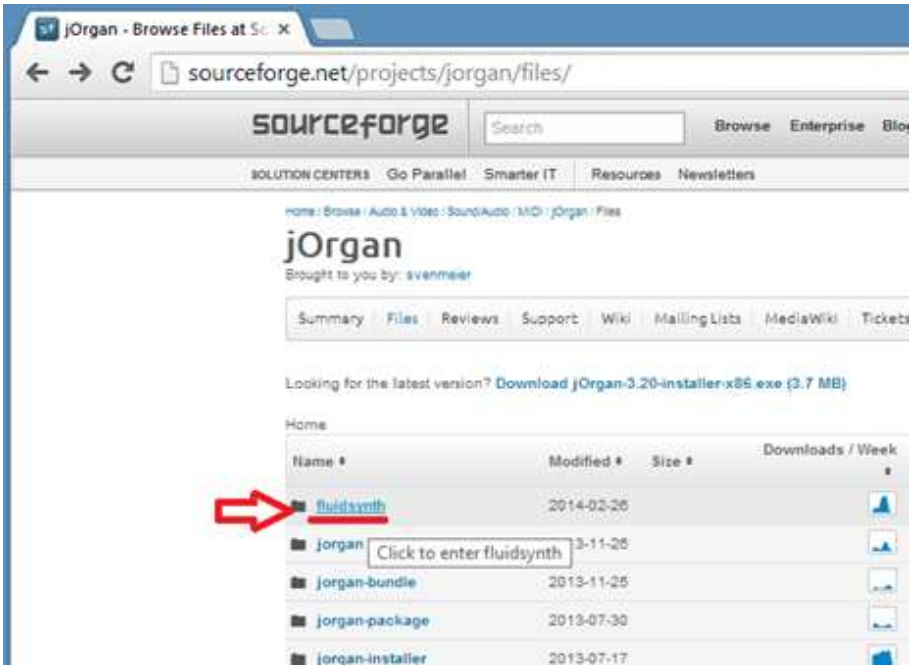
DOWNLOADING REQUIRED PACKAGES

FLUIDSYNTH PORTAUDIO WASAPI PATCH

We will go back to the jOrgan home page to go through all the steps to get the 64-bit WASAPI patch.

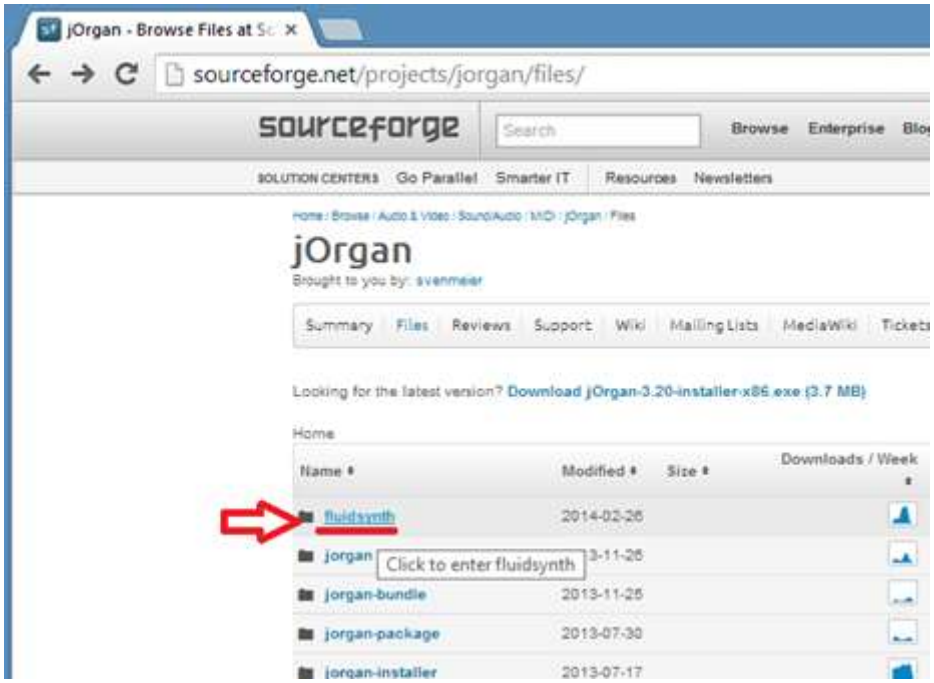


Click on “Files” again

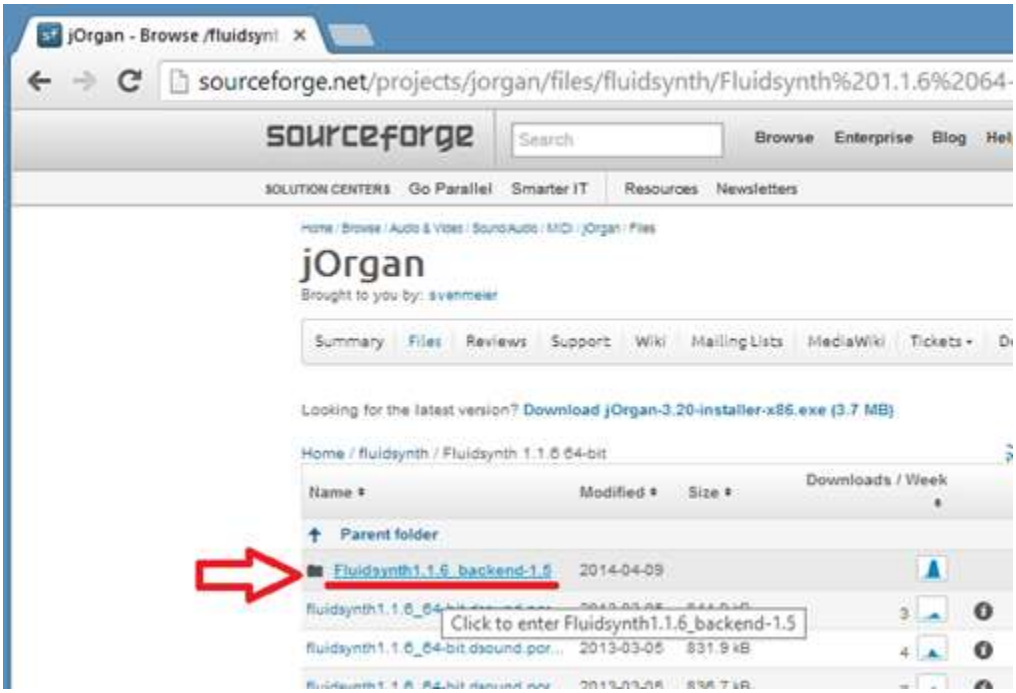


This time click on “fluidsynth”

DOWNLOADING REQUIRED PACKAGES

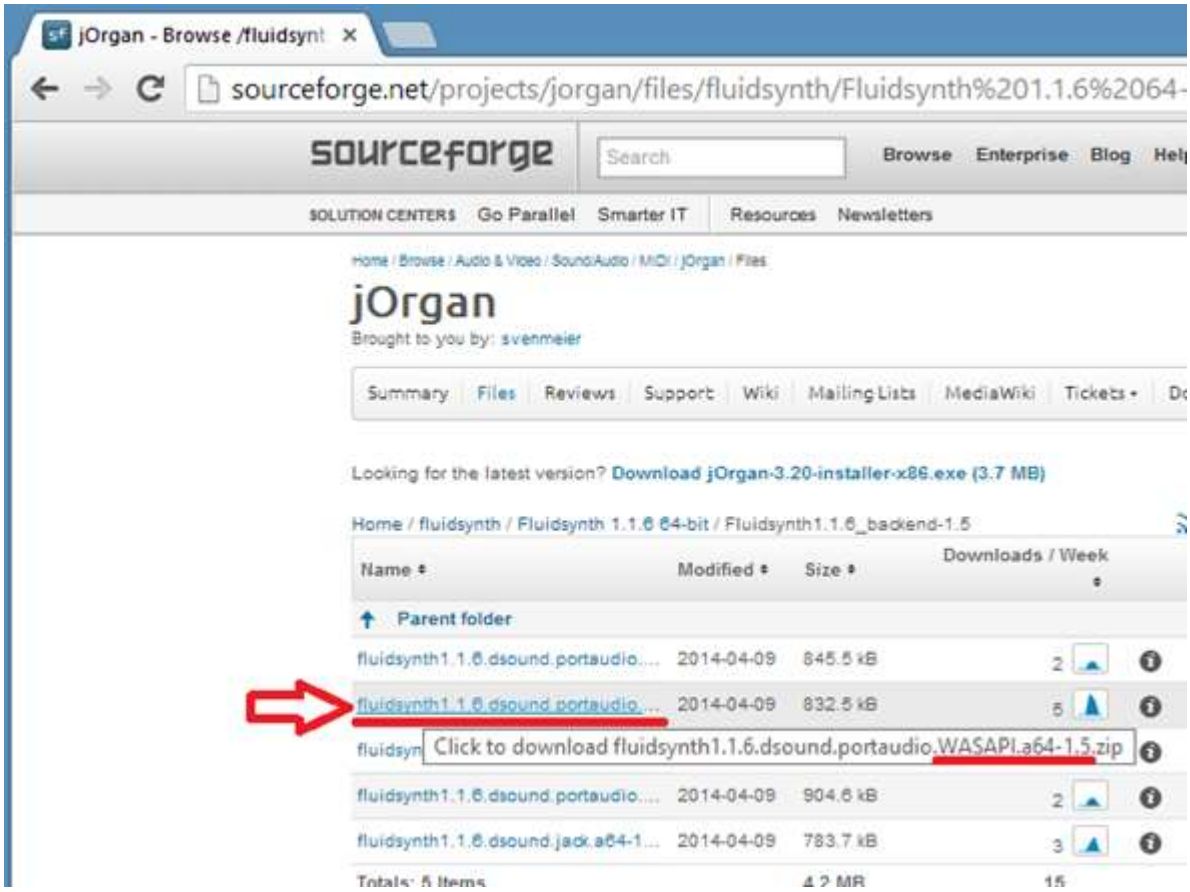


Then click the link to “Fluidsynth 1.1.6 64-bit”



Then click the link to “Fluidsynth 1.1.6 backend-1.5”

DOWNLOADING REQUIRED PACKAGES



This gets us to the actual download link, but you need to be careful. You do not see the full file name until you hover your muse pointer over the link.

We need “fluidsynth 1.1.6.dsound.portaudio.WASAPI.a64-1.5.zip”

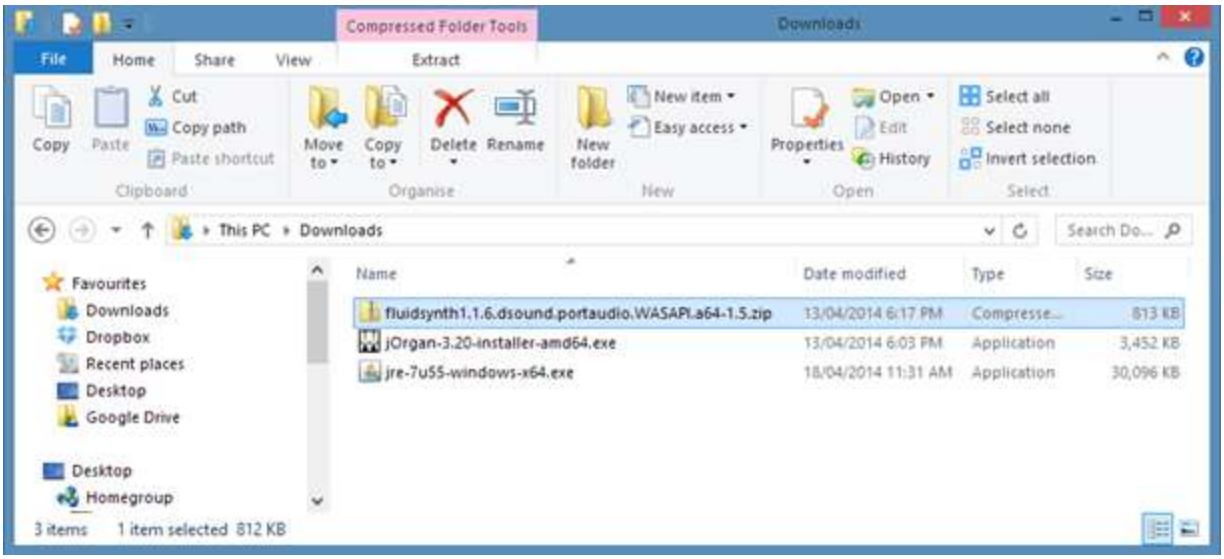
http://sourceforge.net/projects/jorgan/files/fluidsynth/Fluidsynth%201.1.6%2064-bit/Fluidsynth1.1.6_backend-1.5/fluidsynth1.1.6.dsound.portaudio.WASAPI.a64-1.5.zip/download

DOWNLOADING REQUIRED PACKAGES

DOWNLOADED FILES

You should now have the following three files in your Downloads folder.

(Or where ever you chose to save the files.)



All files need to have "64" near the end of their name.

Installing the Packages

INSTALLING JAVA

Java is the “Runtime Environment” that jOrgan runs in. The actual jOrgan package on its own will not function in Windows without the Java Runtime Environment.

To install Java, double click on the “jre-7u55-windows-x64.exe” file you have downloaded.

Click “Install” you will see…

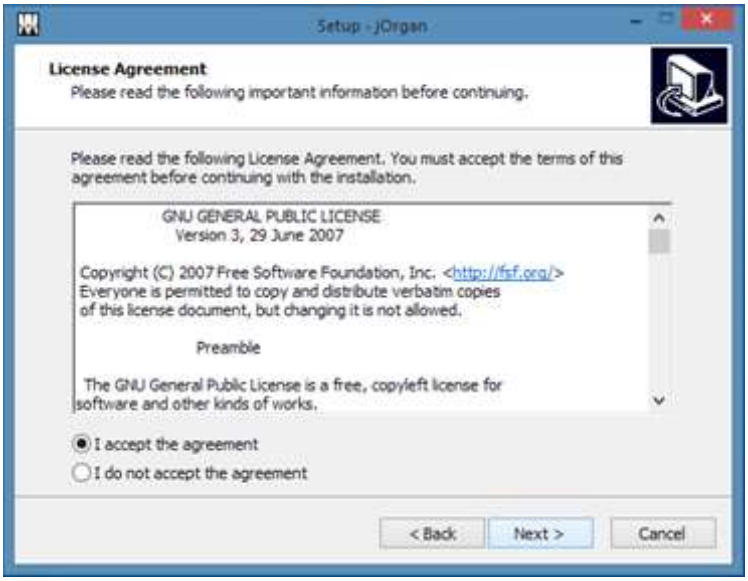
Then you will see…

INSTALLING JORGAN

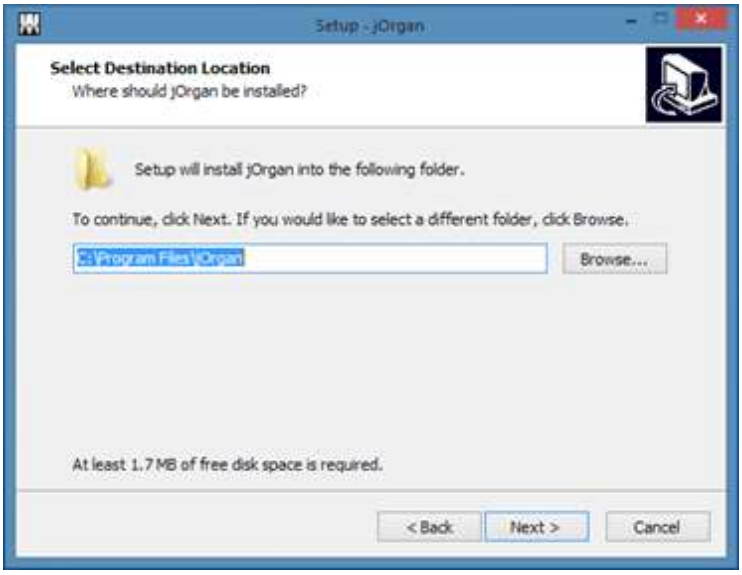
Now install jOrgan. Double click on the "jOrgan-3.20-installer-amd64.exe" file you downloaded.

Click "Next"

INSTALLING THE PACKAGES



Click “I accept the agreement”, then “Next”

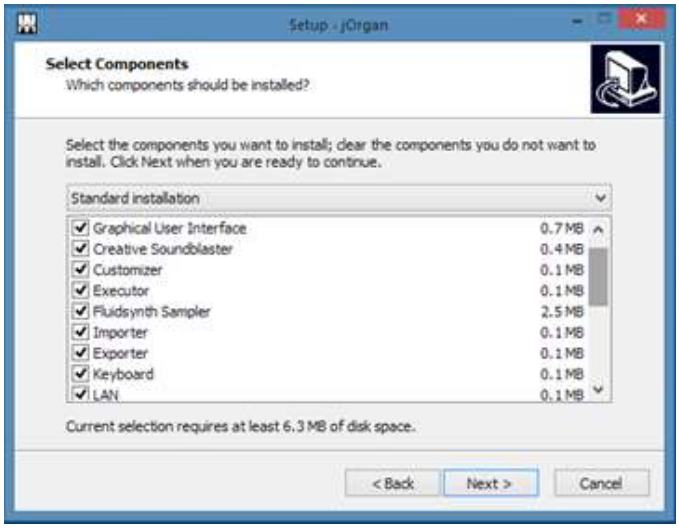


Let jOrgan install to the default path unless you know what you are doing and know where you want to install it.

(It shouldn’t go in “Program Files (x86)” folder because that folder is only for 32-bit programs)

INSTALLING THE PACKAGES

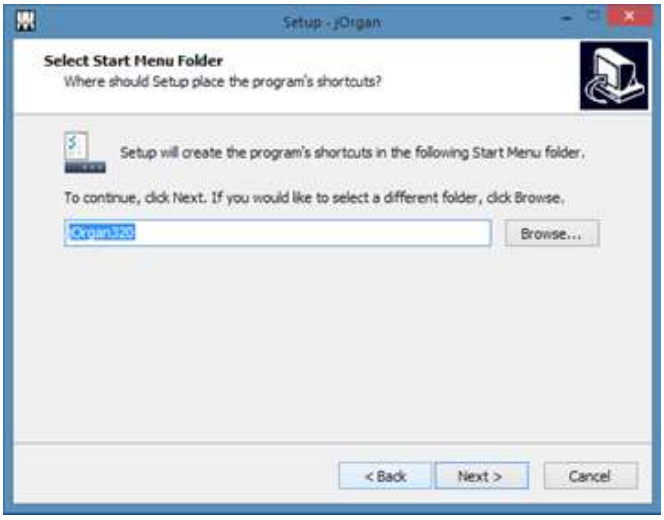
Click “Next”



Use the slide-bar on the right to scroll down and make sure every component is selected with a tick.

Then click “Next”

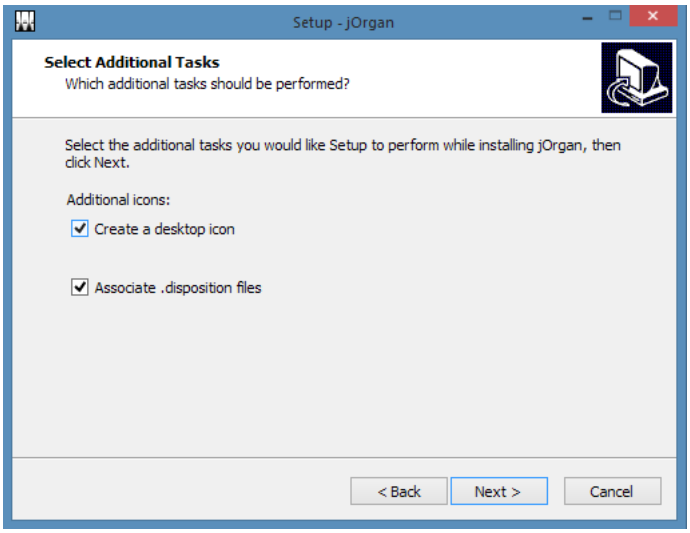
(jOrgan is a very compact software application and won’t take up much space on your PC even with all its components selected.)



This window will show up with just “jOrgan” by default. This will be fine for you to click “Next”

(I have multiple versions of jOrgan installed so prefer to name the shortcut folder with the version number added.)

INSTALLING THE PACKAGES

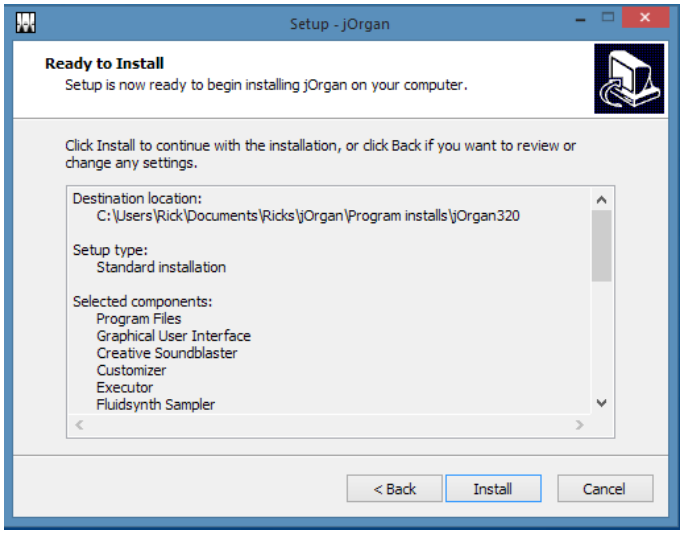


Most people will prefer to have a desktop icon so tick this option.

Tick “Associate .disposition files” to make jOrgan easy to use.

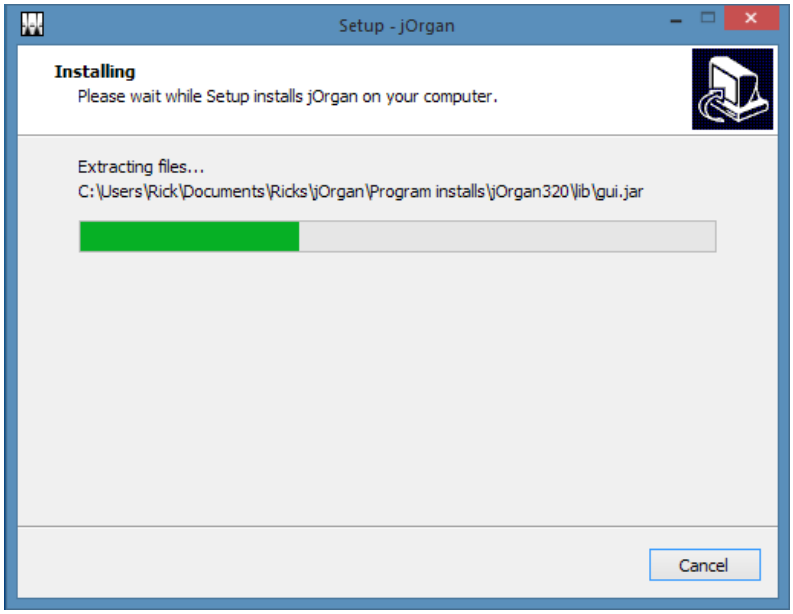
> *(Caution - this associate function will only work on the latest version of jOrgan you have installed, if you have more than one version of jOrgan installed, this tick will cause all .disposition files to start in the latest version when you double click directly on the .disposition file to start the program!)*

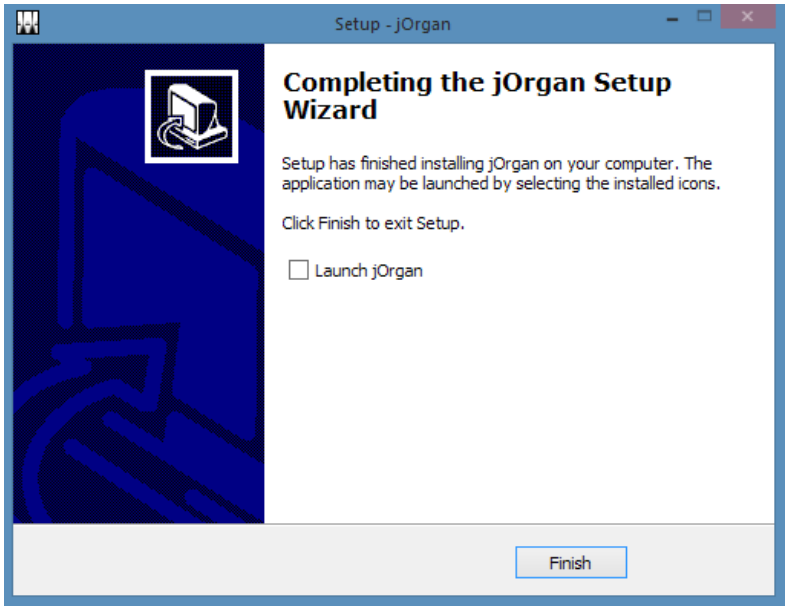
Click “Next”



This is an overview of your selections. Now click “Install”

INSTALLING THE PACKAGES





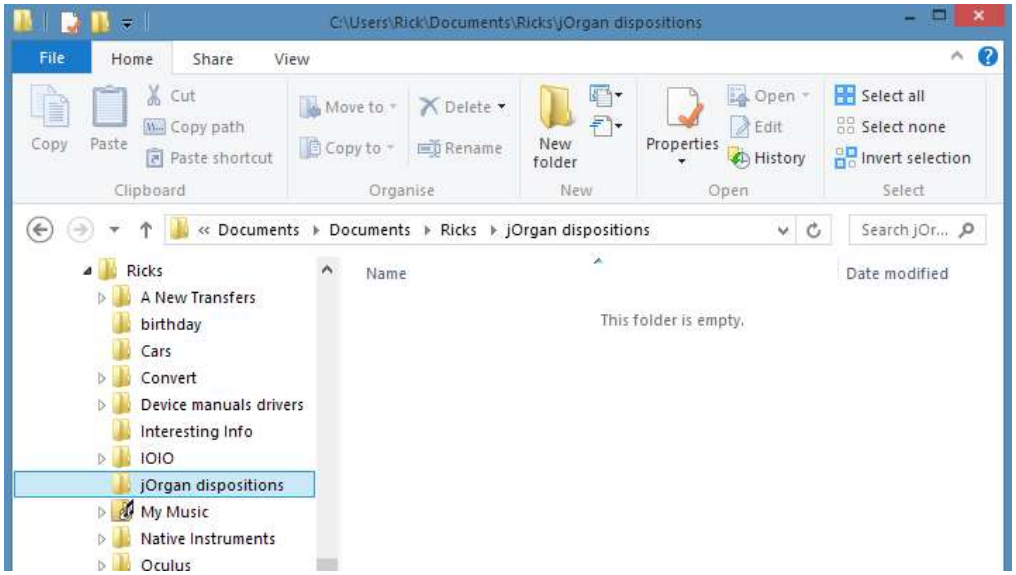
You have now finished this part of the installation. There are some other things we will do before running jOrgan so do not tick “Launch jOrgan”.

Click “Finish”

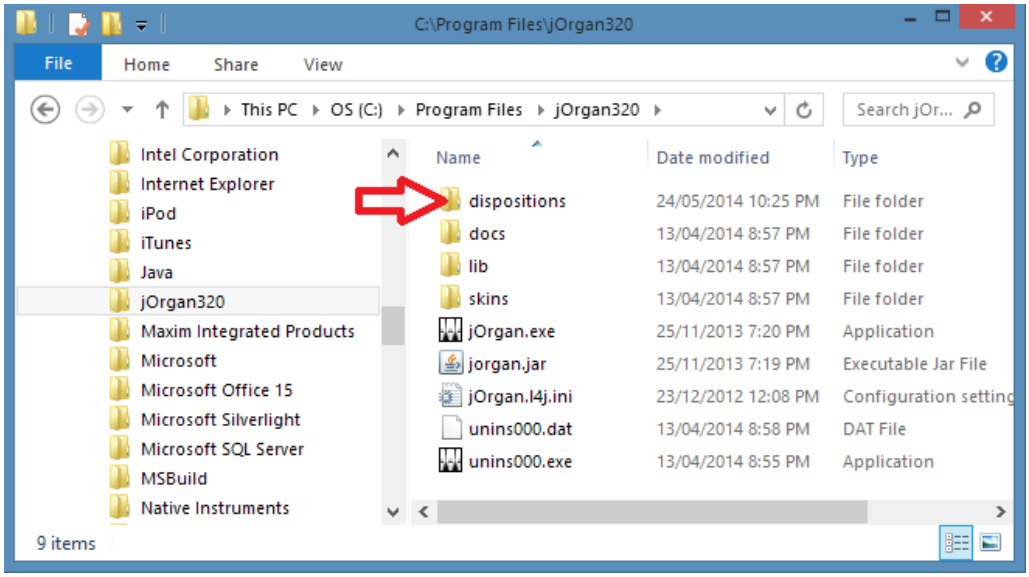
INSTALLING THE PACKAGES

Now a little bit of housekeeping.

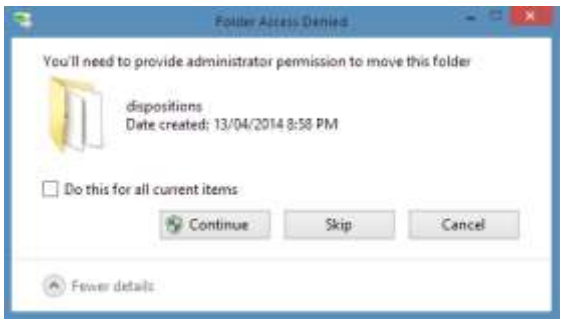
Create a folder in your “Documents” area and call it “jOrgan dispositions”



Find your jOrgan installation folder (most likely C:/Program Files/jOrgan) and “Cut” the “dispositions” folder, then “Paste” it into the new folder you have just created.

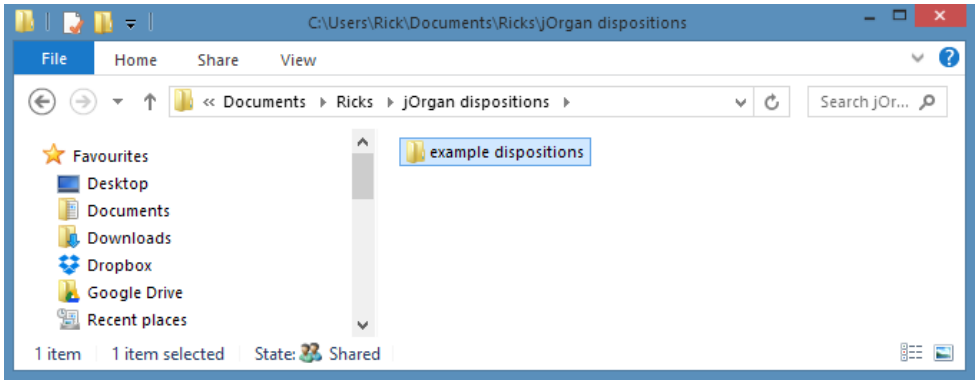


You will be asked to provide “Administrator Permission” to complete this task.

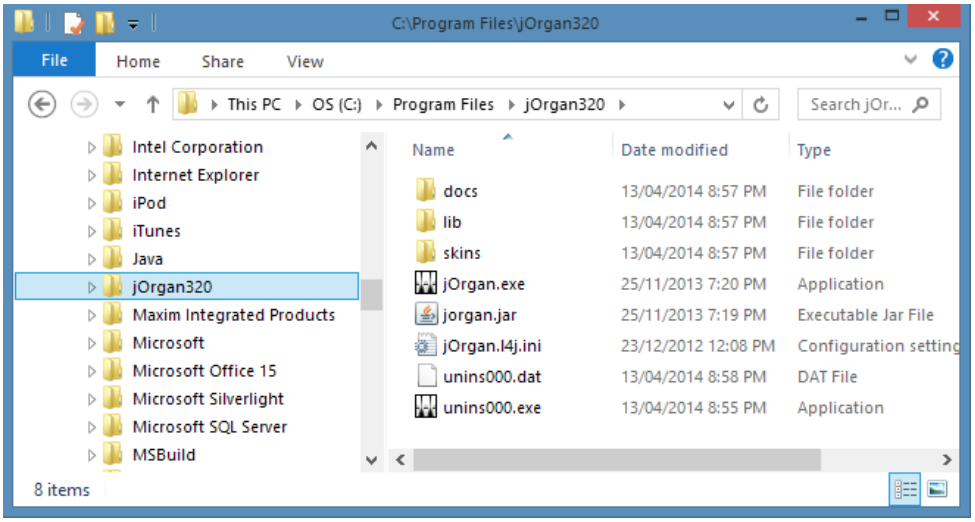


Right click and “Rename” the dispositions folder to “example dispositions”.

Now your “Documents - jOrgan dispositions” folder should look like this:



Your Program Files – jOrgan folder should look like this:



jOrgan disposition files will function almost anywhere you put them on your computer or even on a USB stick. I just think it is neat and tidy to put them all in a logical place.

The only place a disposition file will not work properly is in the Program Files area {where the installation put it by default}. It is because windows tries to protect your computer from programs that attempt to change the contents of files in the Program Files area. You can alter some security settings in windows to allow jOrgan dispositions to function as they need to, but I think it is just easier to place disposition files where windows is happy for them to be used.

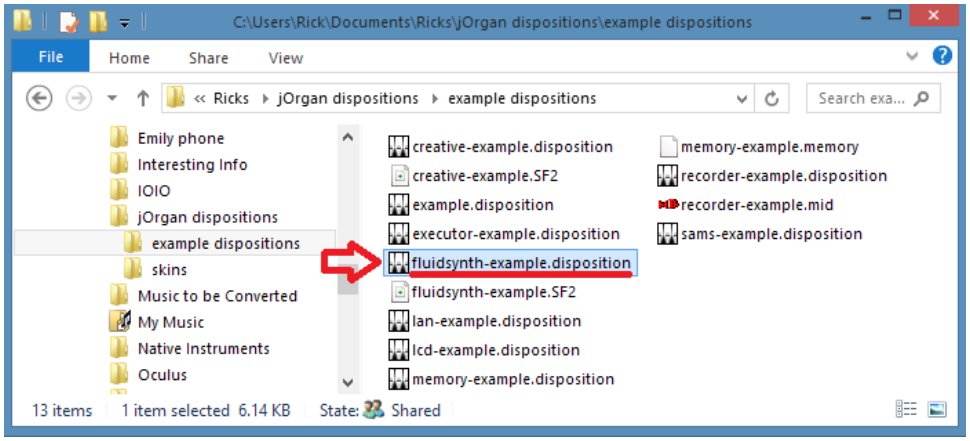
FIRST TEST OF JORGAN

At this point, we will do a quick test to check that you have basic function of your jOrgan installation.

Using Windows File Explorer, go to the "jOrgan dispositions" folder you created in your "Documents" area.

Open the "dispositions" folder you moved here from the jOrgan Program Files installation.

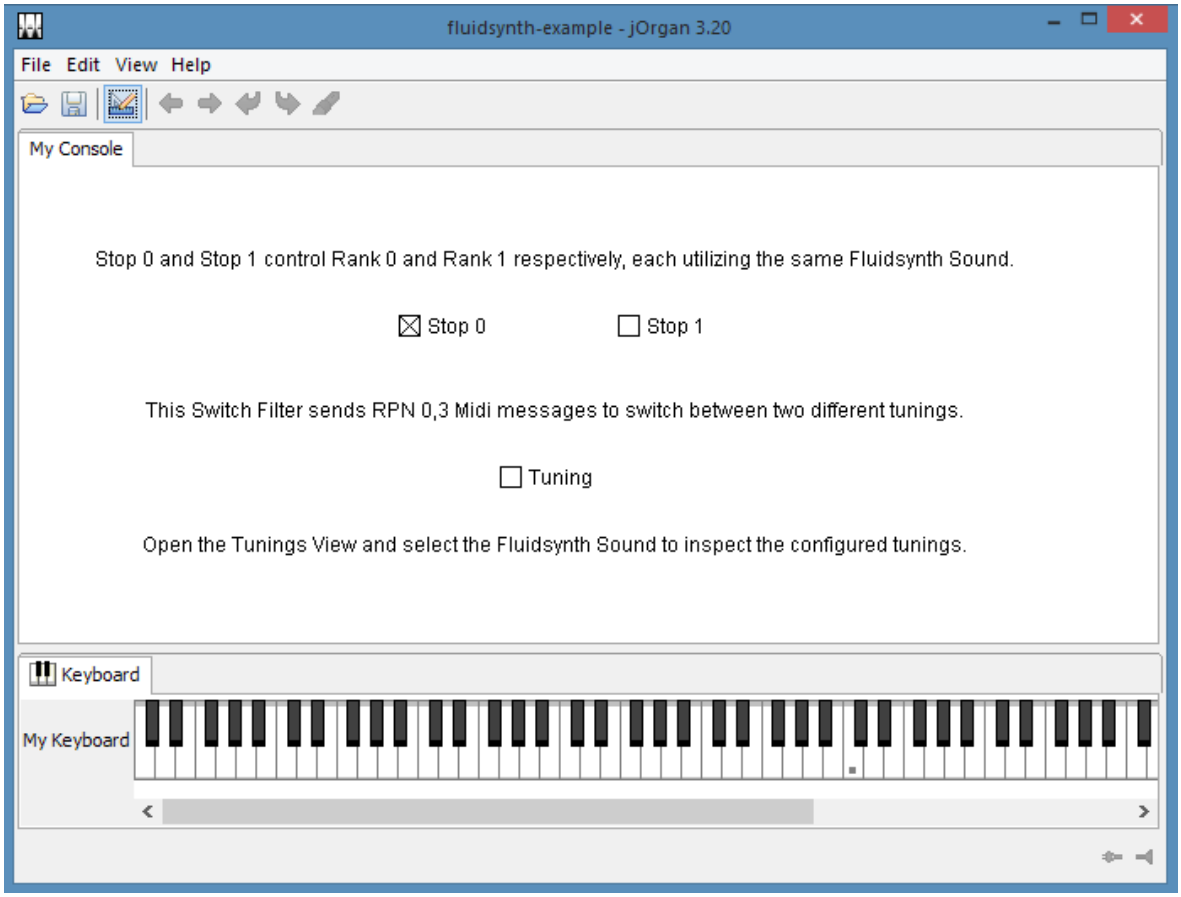
Double-click on "fluidsynth-example.disposition".



We will assume that during the installation you did select to "Associate .disposition files" as mentioned on page 15. If so you will see the jOrgan icon beside all file names ending in ".disposition", and when you double click on the file, it will open jOrgan V3.20 as well as this particular disposition.

Please keep in mind that jOrgan can be compared to a word processor program. Either you can "open" the program and be presented with a blank page, or you can "open" a document you previously created, or someone has given you. If you open a document directly, it automatically opens the word processing program to be able to display the document. A xyz.disposition is to jOrgan, as a xyz.doc file is to your word processor program.

After a little while, you should see this screen.



This is no indication of what a jOrgan disposition will look like or sound like, but is a useful step in checking our progress so far.

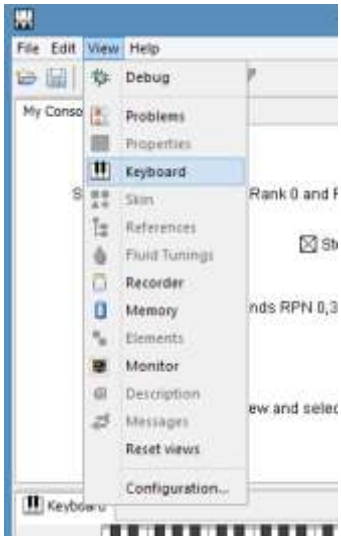
Use your mouse left click to press some keys to the right end of the keyboard *(the "C" with the dot is middle C)*. You should hear some sound.

If you do not have the keyboard displayed, or your sound can barely be heard, we will step through the following adjustments.

INSTALLING THE PACKAGES

DISPLAY THE KEYBOARD

Click “View” then click “Keyboard” in the list. *(The list may show in a different order for you)*

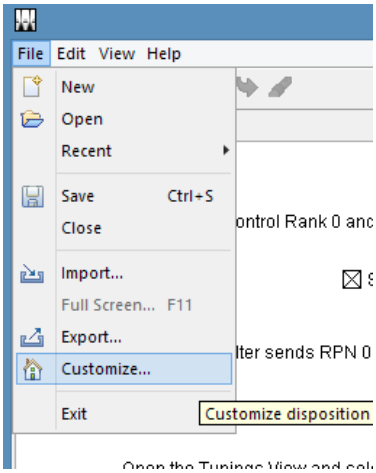


RAISE THE OUTPUT VOLUME

First, check that your computer volume is up at a substantial level.

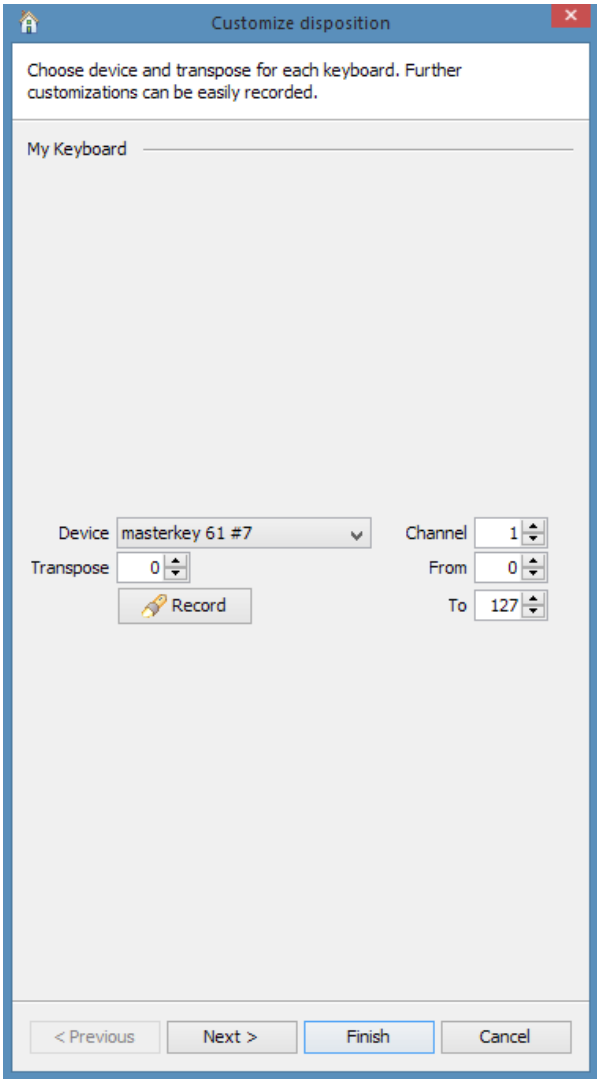
> *(Check by playing a music file or a YouTube clip on your computer. If you have your computer connected to powerful external speakers, take care with your volume checks, or better yet, get things started with headphones then connect external speakers later.)*

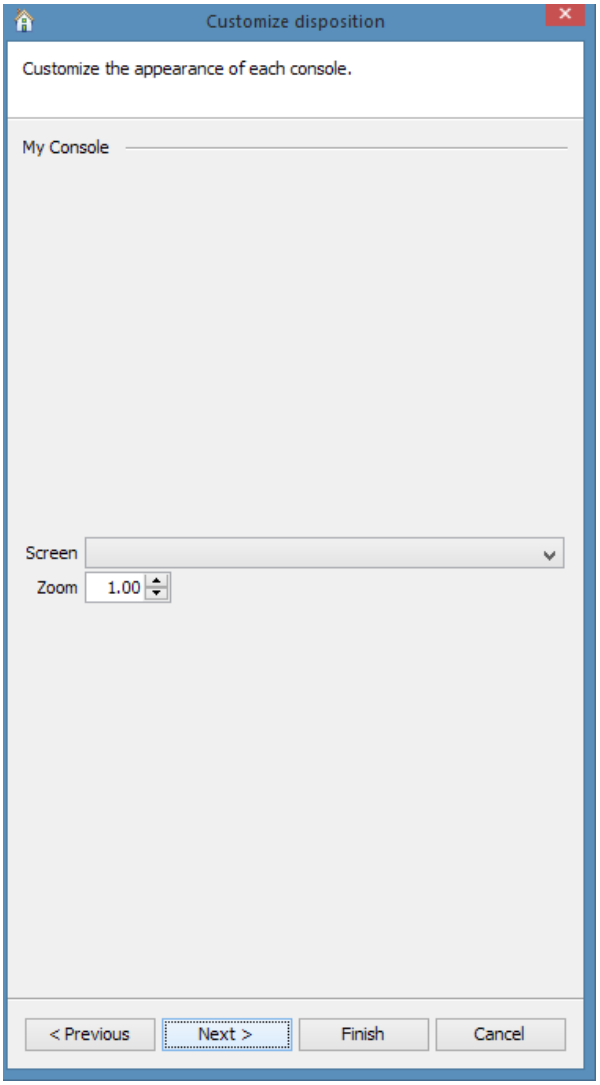
Click “File” then select “Customize…” from the list.



You will now see the “My Keyboard” external MIDI keyboard settings. Just ignore this for now and click next.

Then you will see the “My Console” screen and zoom settings. Just ignore again for now and click next.





INSTALLING THE PACKAGES

You will now see “Customize Fluidsynth sound.”

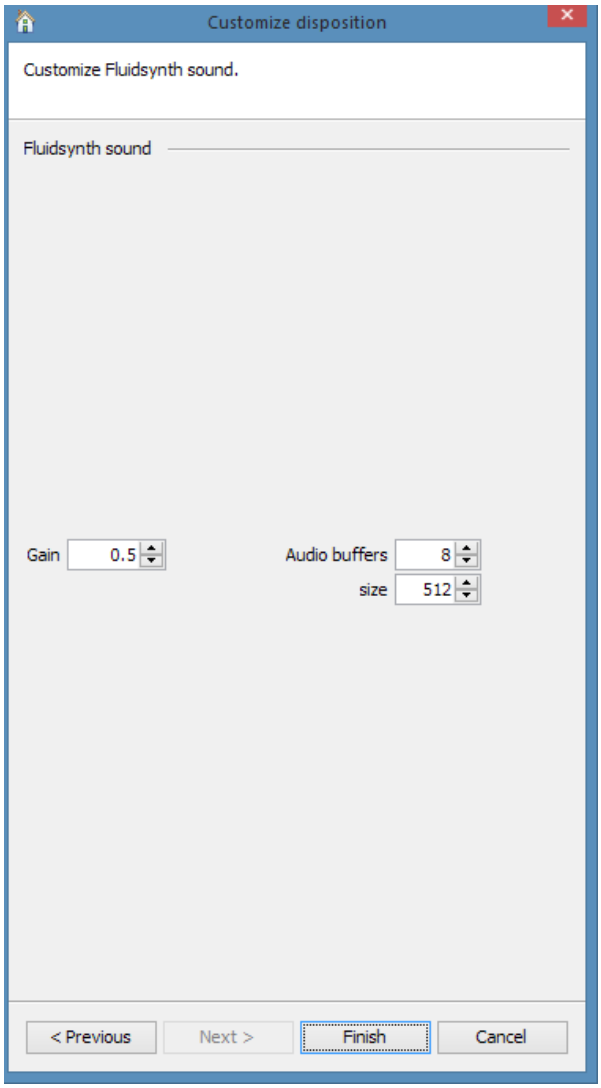
The “Gain” is likely set to a very low level.

Use the up arrow to adjust to a value of say “0.5”

Click “Finish”

Now try pressing some notes again using your mouse as mentioned on page 20.

You should now here some distinct sounds.



If you do not hear any sound, check over things again.

Make sure you have not mixed a 32-bit version of jOrgan with a 64-bit version of Java or vice versa.

Make sure you can hear sound from other applications on your computer.

Ask for help either on the jOrgan user forum https://lists.sourceforge.net/lists/listinfo/jorgan-user,

Or email me greenfox4075@gmail.com .

INSTALLING THE PACKAGES

INSTALLING THE WASAPI PATCH

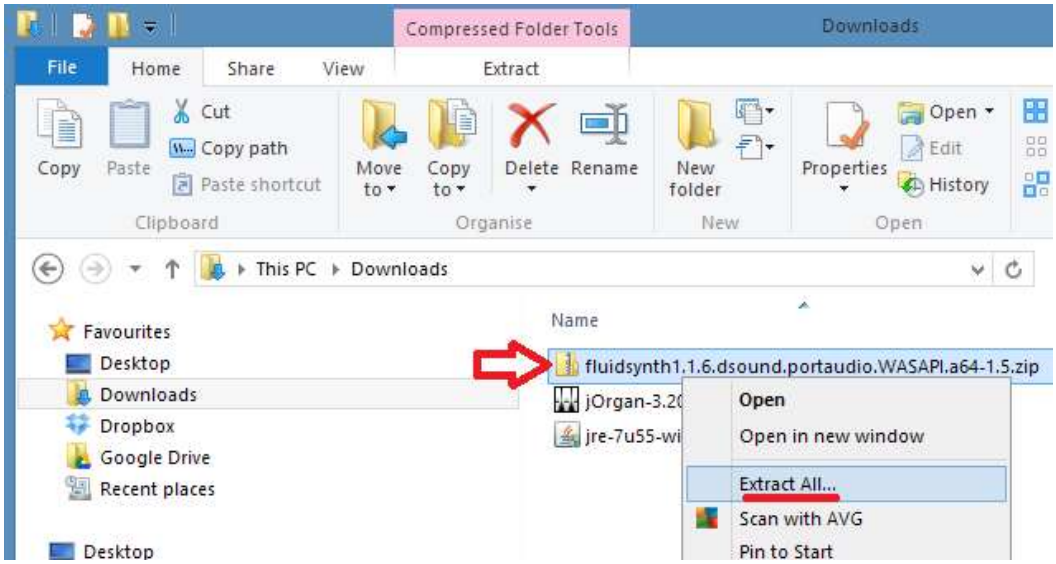
Earlier we downloaded the “fluidsynth 1.1.6.dsound.portaudio.WASAPI.a64-1.5.zip” zip file. This is the “patch” we need to update the audio output of Fluidsynth (Fluidsynth is the linked virtual synthesizer program that creates the sound we hear from jOrgan).

The standard download is the only package that will play sounds on all operating system formats. It will perform well on Windows XP, however many users will find unacceptable delay running on Vista, Win7 or Win8 (8.1).

This patch file will provide a new path for the audio that is much more efficient in the newer operating systems. As well as virtually eliminating audio delay for live MIDI playing of jOrgan, it also provides a clearer audio sound quality.

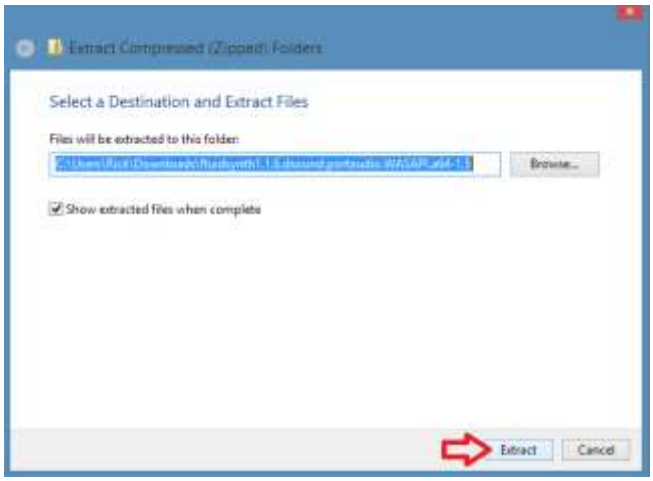
Open Windows File Explorer and click into your Downloads folder.

Right click on the “fluidsynth 1.1.6.dsound.portaudio.WASAPI.a64-1.5.zip” file



Select “Extract All…” from the list.

INSTALLING THE PACKAGES



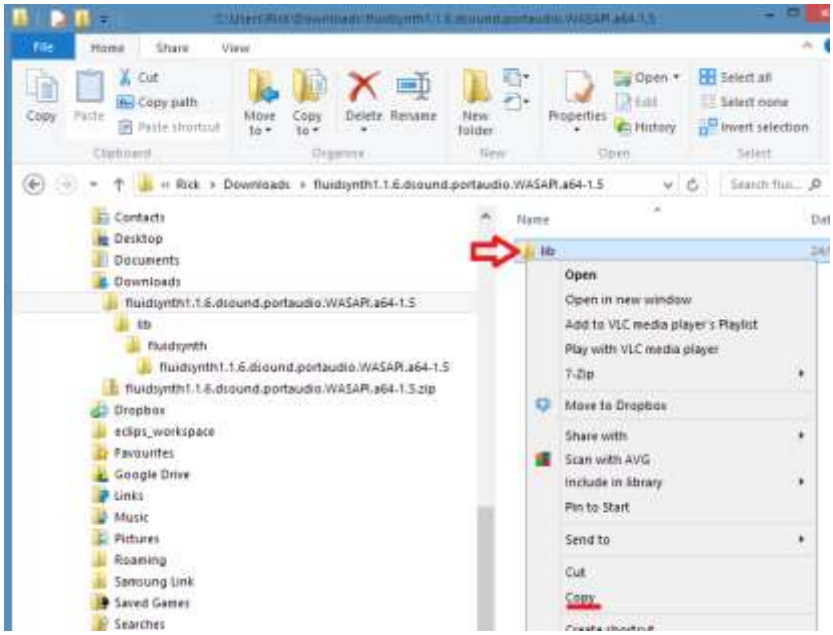
If you leave the default path in this window a new *(no longer zipped)* folder will be created in this downloads folder where you are.

Click “Extract”.

You will now find a new folder in your Downloads folder. This folder will be called “fluidsynth1.1.6.dsound.portaudio.WASAPI.a64-1.5”

Inside this folder, you will find another folder called “lib”

Right click on the folder called “lib” and select “Copy”



INSTALLING THE PACKAGES

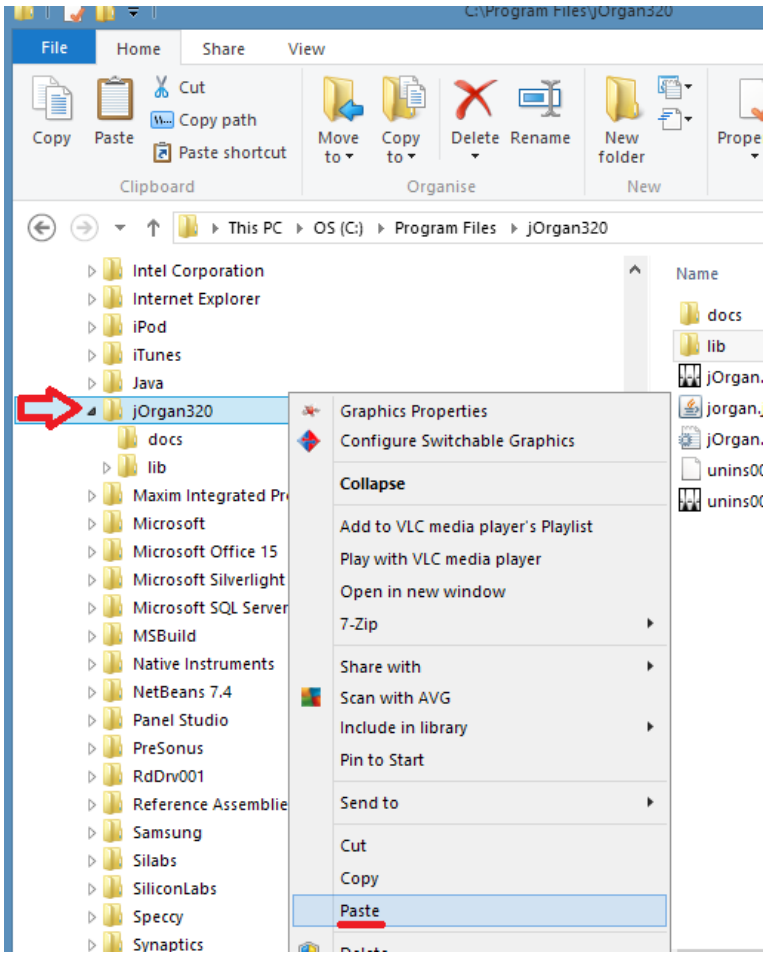
Now open Windows File Explorer, find your “Program Files” folder

(On my system it is: “This PC” – “OS (C:)” – “Program Files”) *{you’re C: drive might have a different name}*

Scroll down to your “jOrgan” folder.

Right click on the jOrgan folder and select “Paste”

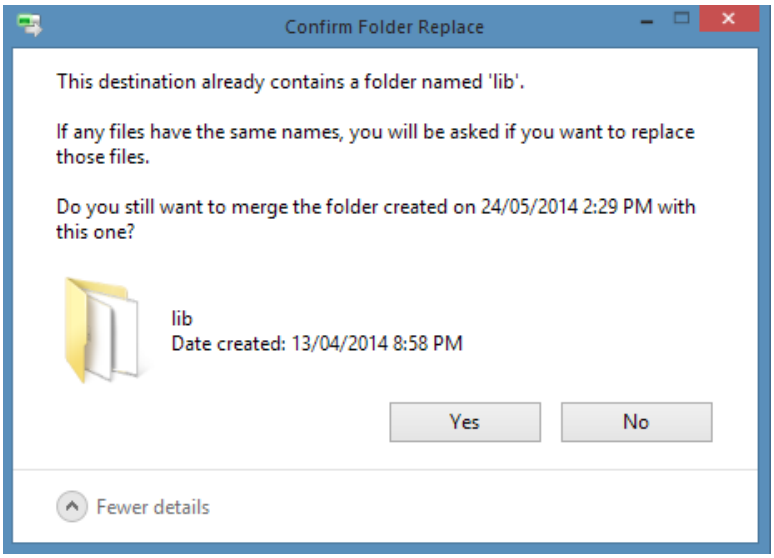
(There is already a “lib” folder there, this will just add to it)



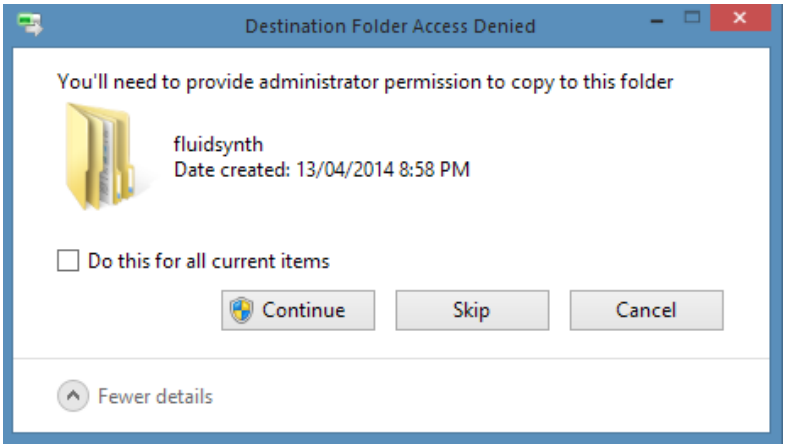
INSTALLING THE PACKAGES

You will get the following warnings.

Click Yes.



Click Continue



Now in Program Files – jOrgan – lib, you will find a folder called “fluidsynth”.

If you click into this “fluidsynth” folder, you should now find two folders.

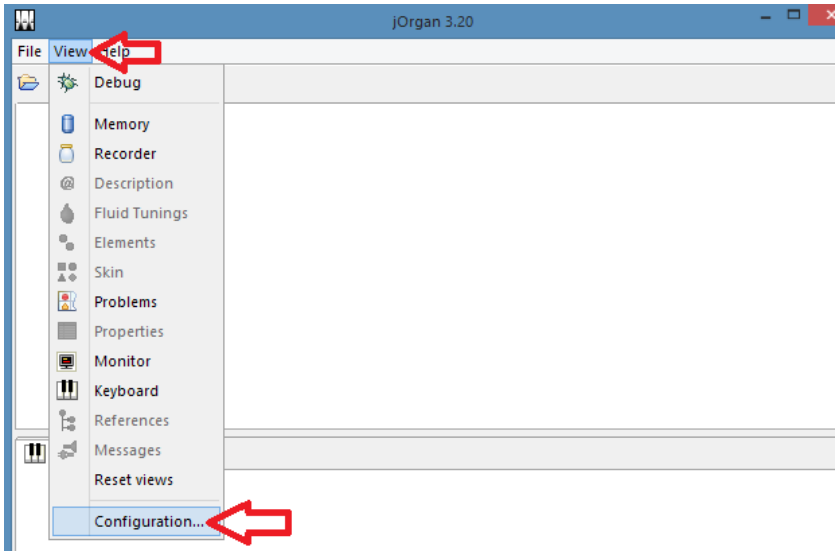
One called “default”, and one called “fluidsynth1.1.6.dsound.portaudio.WASAPI.a64-1.5”

CONFIGURING THE WASAPI PATCH IN JORGAN

Now that the files are in place we need to change some settings in jOrgan so the program knows that it has new capabilities.

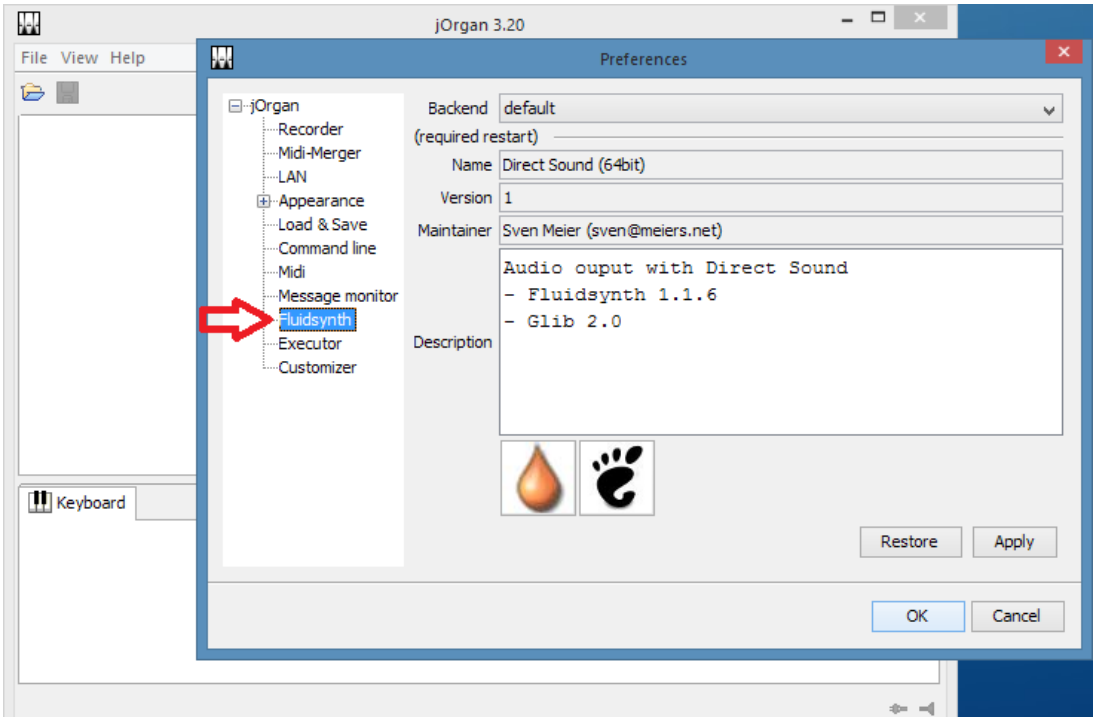
Open jOrgan without any disposition, just using the start icon *(the install put on your desktop)*, or from the start menu. (or open the fluidsynth-example.disposition we opened earlier)

Click “View” then “Configuration”.



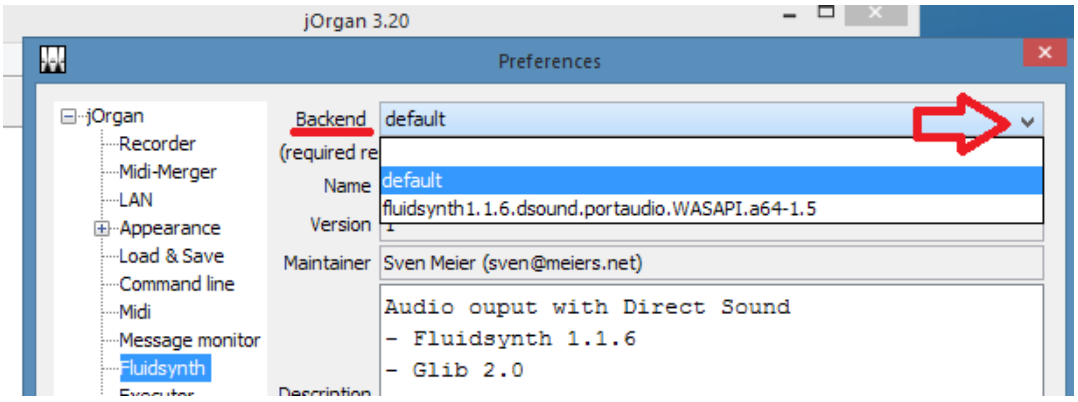
Click “Fluidsynth” on this Preferences window.

You should now see similar to below, particularly looking at the right side.



Look for the “Backend” selection box at the top right, and click the drop-down arrow at the far right.

You should now see “default” and “fluidsynth1.1.6.dsound.portaudio.WASAPI.a64-1.5” in the list.



Select the “fluidsynth1.1.6.dsound.portaudio.WASAPI.a64-1.5” option

Click “OK” at the bottom of the Preferences window.

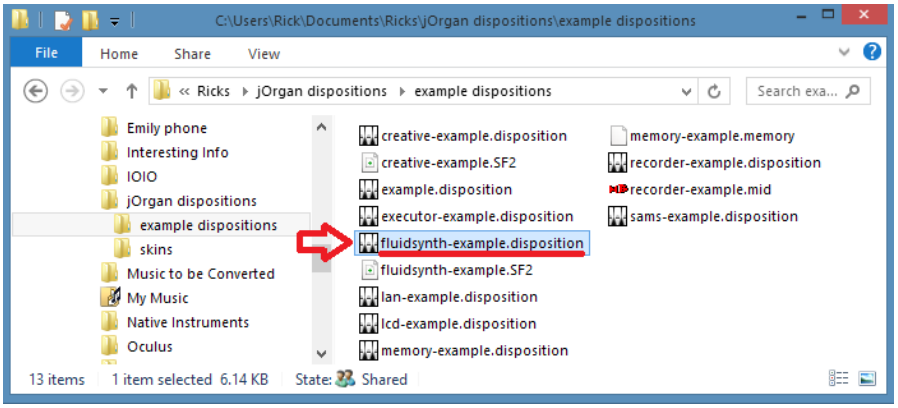
TEST AGAIN FOR SOUND FUNCTION

At this point, we will test again to check that you have sound function of your jOrgan installation.

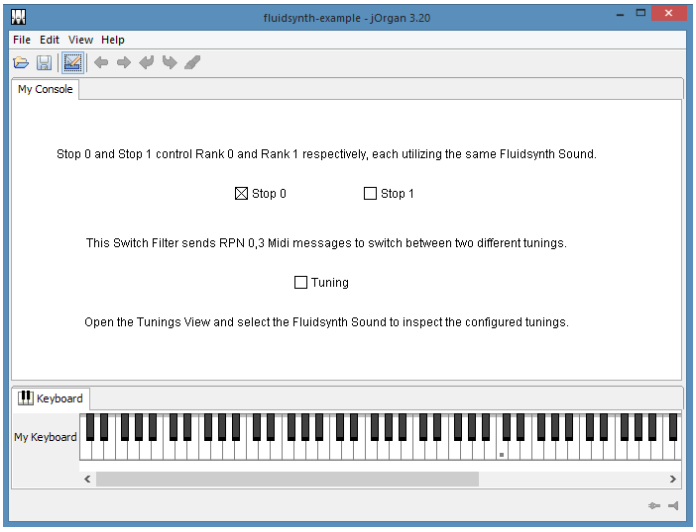
Using Windows File Explorer, go to the “jOrgan dispositions” folder you created in your “Documents” area.

Open the “dispositions” folder you moved here from the jOrgan Program Files installation.

Double-click on “fluidsynth-example.disposition”.



After a short while, you should see this screen again.



Use your mouse left click to press some keys to the right hand end of the keyboard. You should hear some sound.

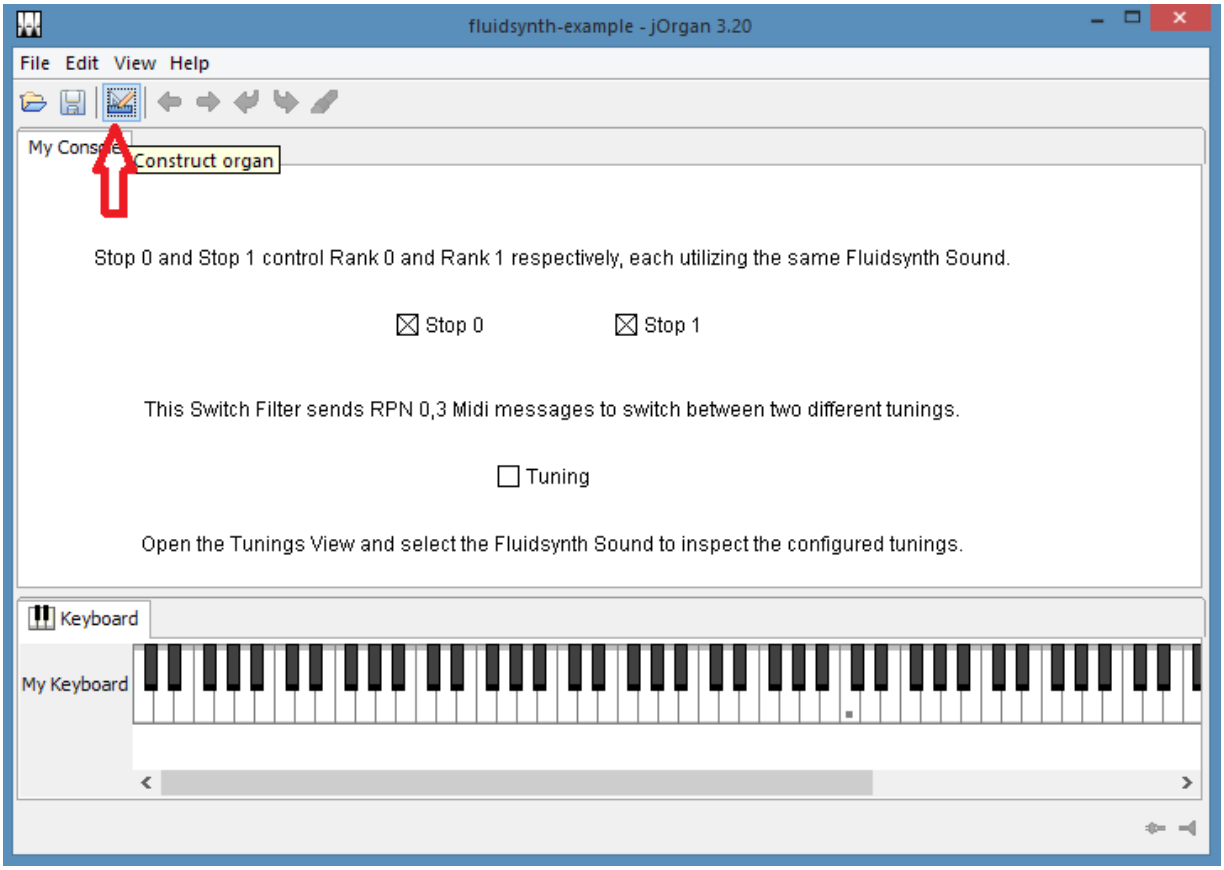
(The “C” with the dot is middle C)

INSTALLING THE PACKAGES

FLUIDSYNTH SETTINGS IN A DISPOSITION

With the fluidsynth-example.disposition still open, it is a good opportunity to look at deeper fluidsynth settings inside jOrgan that it is important to know about.

Click on the “Construct Organ” icon *(has an image of a setsquare, ruler and pencil)*



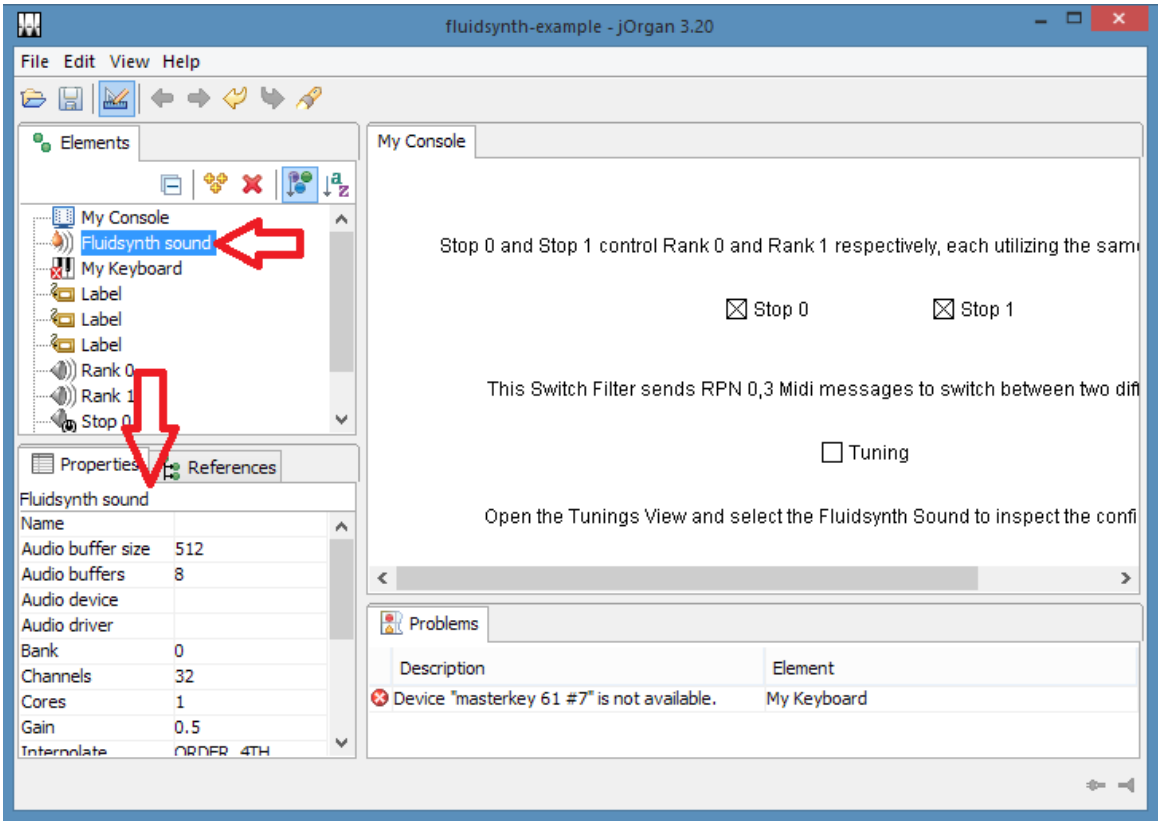
INSTALLING THE PACKAGES

In the Construct mode view…

Click on the “Fluidsynth sound” item in the “Elements” section

Down below you will see the Properties list for Fluidsynth sound

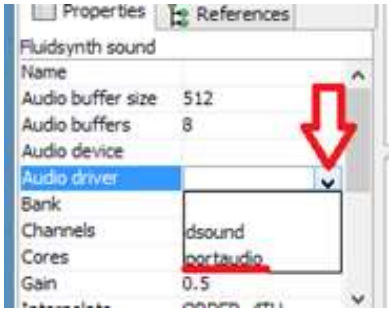
(If you do not see the “Elements” tab and/or the “Properties tab, click “View” from the toolbar and select them from the list, like we did for the keyboard earlier)



We need to set the “Audio driver” and “Audio device”, as well as need to check the “Sample rate” setting.

INSTALLING THE PACKAGES

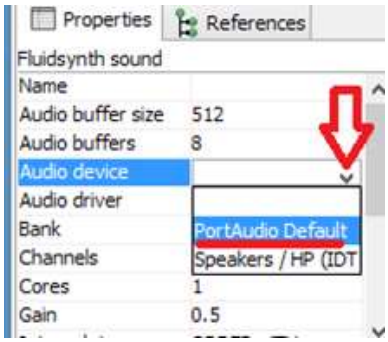
Audio driver first, *(even though it is below the other in the list)*



Click the dropdown box to the right of the "Audio driver" line.

Select "portaudio". It will take a few seconds for the setting to show up in the display.

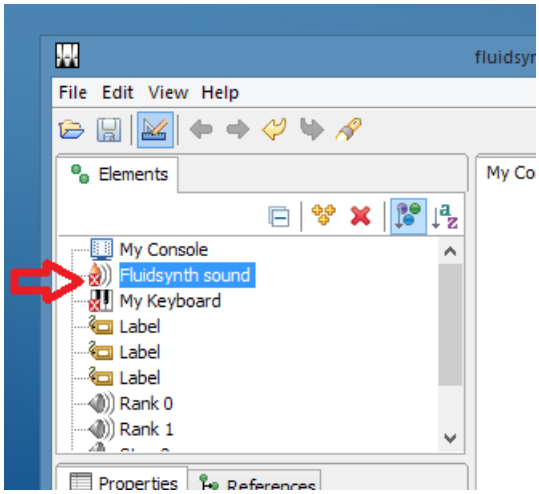
Audio device second



Click the dropdown box to the right of the "Audio device" line.

Select "PortAudio Default" unless you have a specific audio device that you would rather use.

Sample rate



An indicator that you will need to change the sample rate is a red dot with an "x" showing on the Fluidsynth "Element", as you can see to the left.

If you look back at the Construct mode view on the previous page, you will see there is no red dot with an "x" on the Fluidsynth element *(but there is on the Keyboard element, we will cover that soon.)*

It seems that the default value for Sample rate in the fluidsynth patch is 44,100.

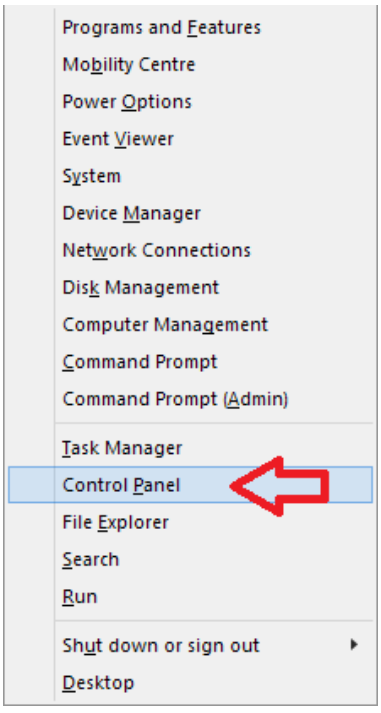
The other likely option is 48,000.

This sample rate setting needs to match with the setting in the sound card you are using. You can either change this setting to match your soundcard, or change your soundcard to match this. *(If you change the soundcard setting, you could find that it upsets other virtual organ software you might have loaded on your computer.)*

You may also find that once you have sound, the sound you get is at the wrong pitch. That means that these settings do not match the sample rate used by the soundfont. I have both my fluidsynth sample rate and soundcard sample rate set to 44,100 because I know that the SF2 soundfont file I use has samples at 44,100. You can check this by opening the SF2 soundfont file in Polyphone or Viena and looking at the properties of the samples. *(That is another story that we will not attempt to go into at this point.)*

To see your soundcard settings:

In Windows 8, press the Windows key + the "X" key. 

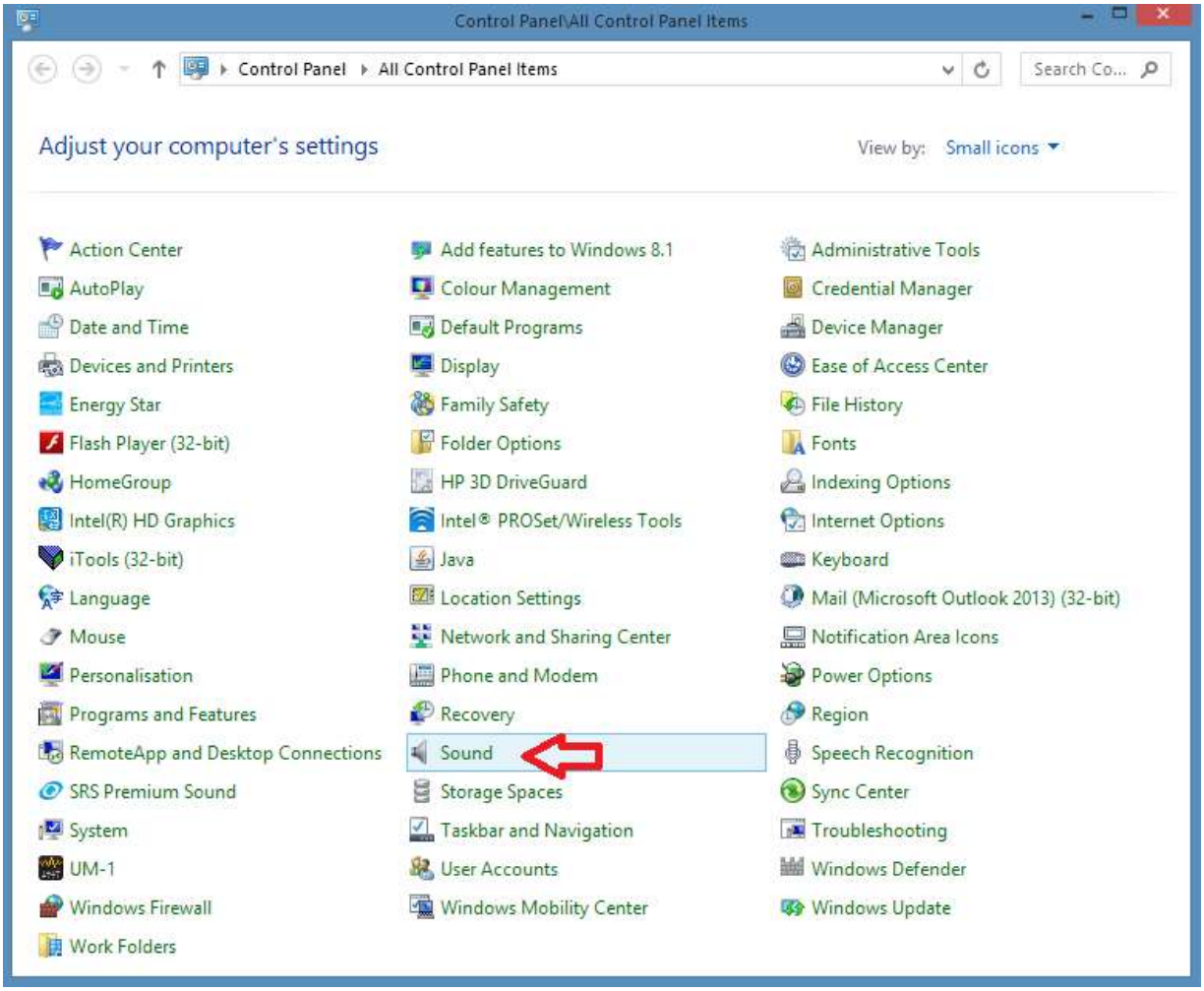


Click on Control Panel, *or press the "p" key (underlined in the name)*

INSTALLING THE PACKAGES

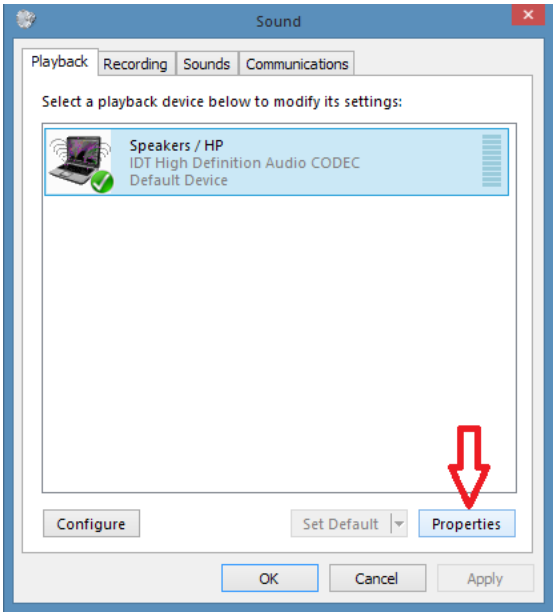
You will now see the control panel.

(If yours looks different to this, check your "View by:" setting near the top right. I find "Small Icons" the most useful setting)



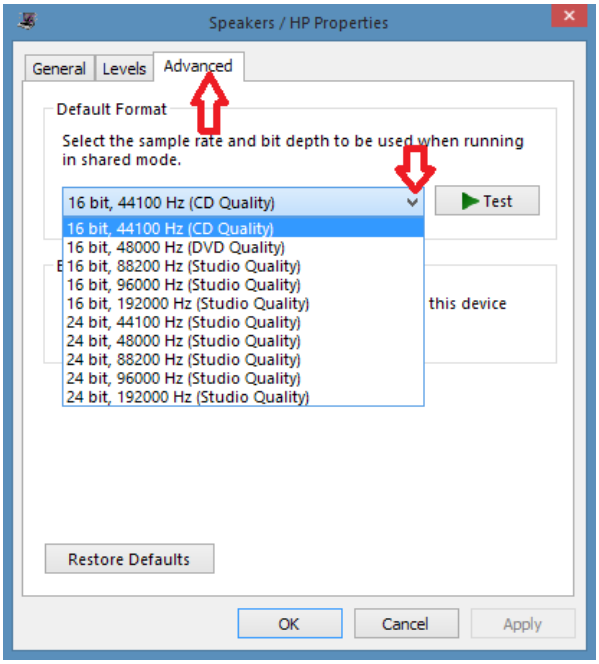
Double click on "Sound"

On my system, I now see…



Make sure you are on the "Playback" tab at the top, highlight your device *(or select the one you want if you have more than one)* and click "Properties".

You should now see something like this, but is likely to be different for different brands of product…



Click on the "Advanced" tab

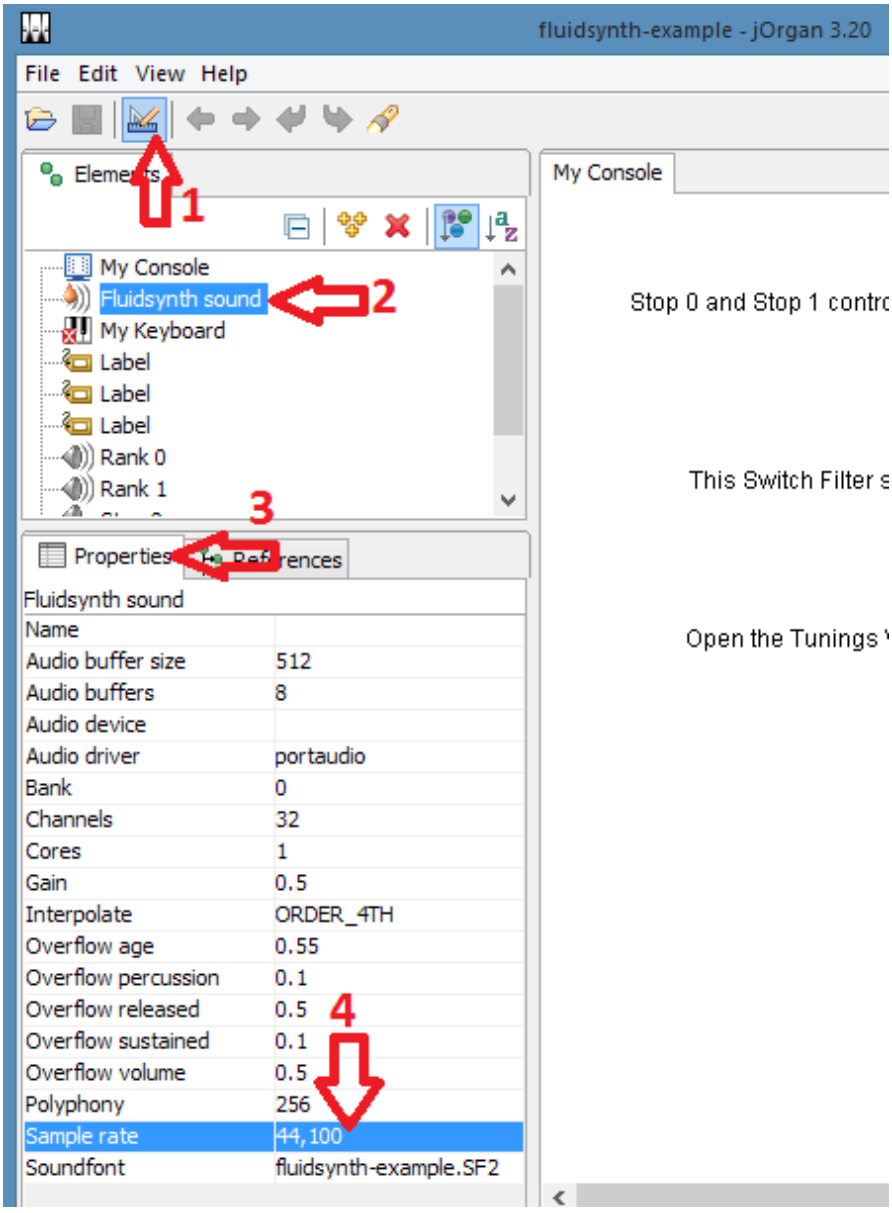
See what setting is currently selected

Or click the dropdown arrow and see the list of options.

Default on my system is 48,000.

I have changed mine to 44,100 to match the Fluidsynth default.

Back to jOrgan Fluidsynth settings in the fluidsynth-example.disposition



You can see that the “Sample rate” property line is second from the bottom.

(You may need to expand your window, or scroll down to see it.)

jOrgan background tips & tricks

THE STRUCTURE OF A JORGAN DISPOSITION PACKAGE

It will be useful to understand the structure of a jOrgan package. It is important to realise that a .disposition file on its own will not do very much. Within this file are links to other files. If these linked files are missing, or if the links in the disposition are looking in the wrong place, then the disposition will not function correctly.

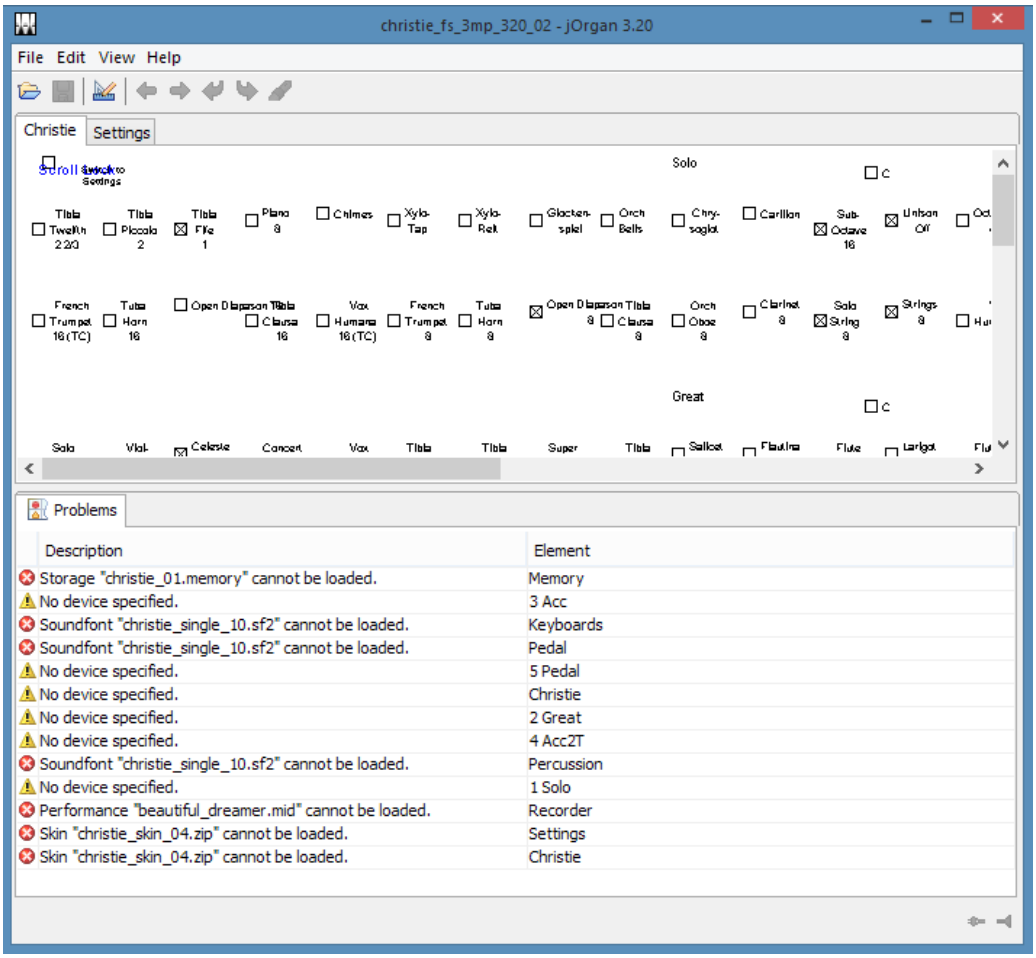
The most common problem that can occur for inexperienced jOrgan users is to either, download an incomplete jOrgan package, or to break up a jOrgan package that had been supplied by the jOrgan constructor, so that the files are not where the disposition expects to find them.

A full featured jOrgan package has the following files:

- .disposition file – this is the key file that holds all the code and structure of each jOrgan
- .zip file – this file contains the images that make up the graphics you see for the console, stops etc. Without this file, you will only see black text on a white background with square check boxes. *(in this instance the zip file is used in its non-extracted format)*
- .sf2 file – every "fluidsynth" based jOrgan needs at least one soundfont file; this is how the sound is created. *(jOrgan itself does not create any sound. Fluidsynth is one of a number of sound generating options for jOrgan, however it is the most integrated option.)*
- .memory file – not every jOrgan will have one or more memory files, however if it has been initiated it will cause an error if it is removed. This file gives you the ability to create multiple combination memory files to give a limitless number of registration combinations.
- .mid file – again not crucial to each jOrgan, but may be included for the incorporated MIDI player function. jOrgan can be configured to play externally created MIDI files, or the internal player/recorder can be used to record all facets of a performance played on a jOrgan including registration changes.
- Disposition creators may add other files directly in this folder, or create other folders to hold extra MIDI files, and/or other documentation to accompany their disposition.

THE "PROBLEMS" TAB

Thankfully, jOrgan has a "Problems" display tab to identify any problems and point toward correcting them.



For the purpose of this example, I have made a mess of the Christie package. I have moved all the associated files out of the folder, and have no MIDI devices connected.

You can see that the "Problems" tab in jOrgan has given us a detailed list of all the things it sees as "problems". You can also obviously see the "Skin" graphics are missing.

You will find that if you double click on a "problem" in the list *(even in "Play" mode)* it will take you into "Construct" mode, and directly to the "properties" line where the "problem" can be fixed.

If your setup shows problems either ask for help on the jOrgan user forum https://lists.sourceforge.net/lists/listinfo/jorgan-user, or email me greenfox4075@gmail.com .

Load the “Christie” Disposition

FINDING JORGAN DISPOSITIONS

To see the potential of jOrgan you will probably want to have a look at a few of the dispositions offered by the community.

From the jOrgan home page click on the “Disposition” link on the left side list of links, or follow this link.

http://sourceforge.net/apps/mediawiki/jorgan/index.php?title=Disposition

You will find a list of links to a range of sites each offering one or more jOrgan dispositions.

JORGAN DISPOSITION NAMING CONVENTIONS – UNOFFICIAL

Let’s look at the jOrgan naming convention used by the main disposition builders:

The “fs” stands for “fluidsynth”, meaning this disposition uses the Fluidsynth software synthesizer to create the sound you hear from this jOrgan disposition. (Maybe we should also add sample rate)

The “3mp” stands for three manuals and pedal, explaining the physical console layout this disposition is built to replicate.

The “320” shows this disposition was created using jOrgan version 3.20. It also means that this disposition will not open in an older version of jOrgan

The “02” indicates that this is revision 2 release of this version of the “Christie” disposition. You will find a document in the folder package outlining updates that have occurred in the evolution of this disposition.

DOWNLOAD THE “CHRISTIE” DISPOSITION

For the purpose of this tutorial, I will step through loading the “Christie” jOrgan three manual theatre organ, which is the disposition I have created.

The “Christie” disposition is hosted on this web page. http://www.tosa-qld.org/vtpo/

(As I mentioned near the beginning of this document, direct links may change as versions change.)

LOAD THE “CHRISTIE” DISPOSITION

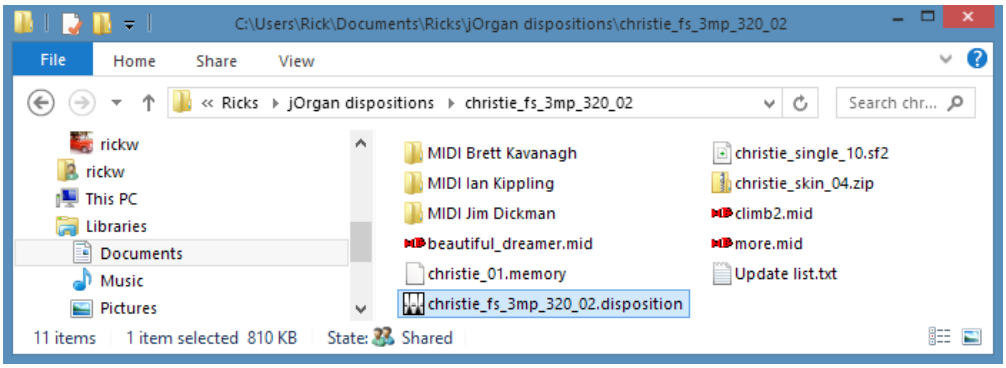
http://www.tosa-qld.org/vtpo/files/christie_fs_3mp_320_02.zip Download this zip file

Un-zip this file as was explained for the fluidsynth zip file on page 24 & 25.

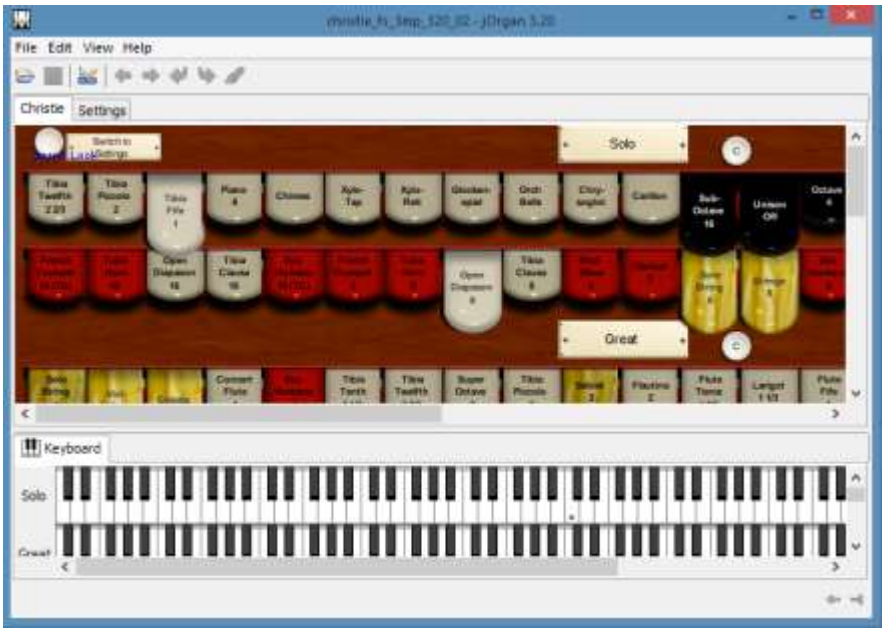
Move the un-zipped folder to the jOrgan dispositions folder you previously created in your Documents area.

RUN THE “CHRISTIE” JORGAN

At this point, you are ready to open the “Christie” jOrgan for the first time. Open the “Christie” folder and double click on the .disposition file *(the file with the jOrgan pipe icon on it)*.



You will first see the jOrgan splash screen, then the blank jOrgan program window, *(after about 15 seconds on my system)* you will see a glimpse of the jOrgan “Christie”.



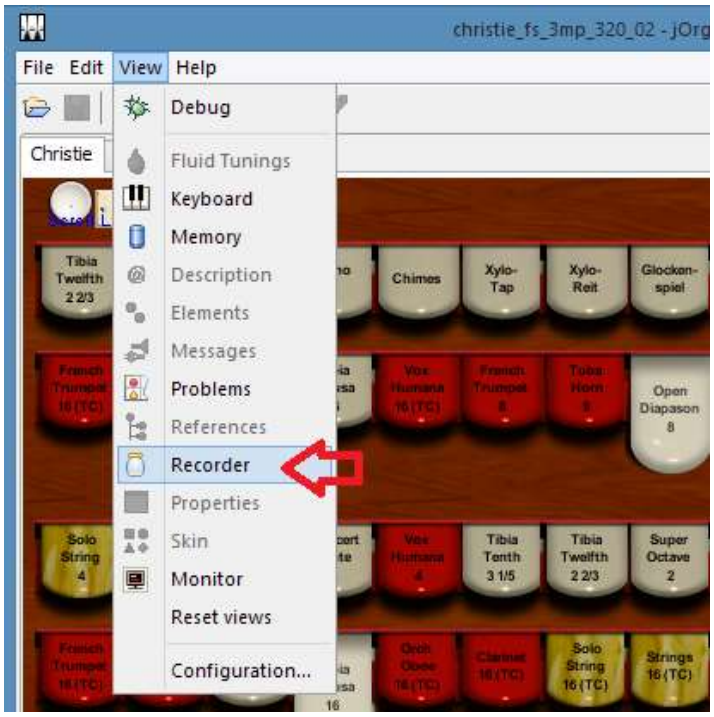
Initial steps with the “Christie” disposition

PLAYING SUPPLIED MIDI FILES

You do not need any external MIDI equipment to be able to use and enjoy jOrgan dispositions, nor do you need to know how to play music. Many of the jOrgan disposition packages include MIDI files you can play in the jOrgan Recorder/Player.

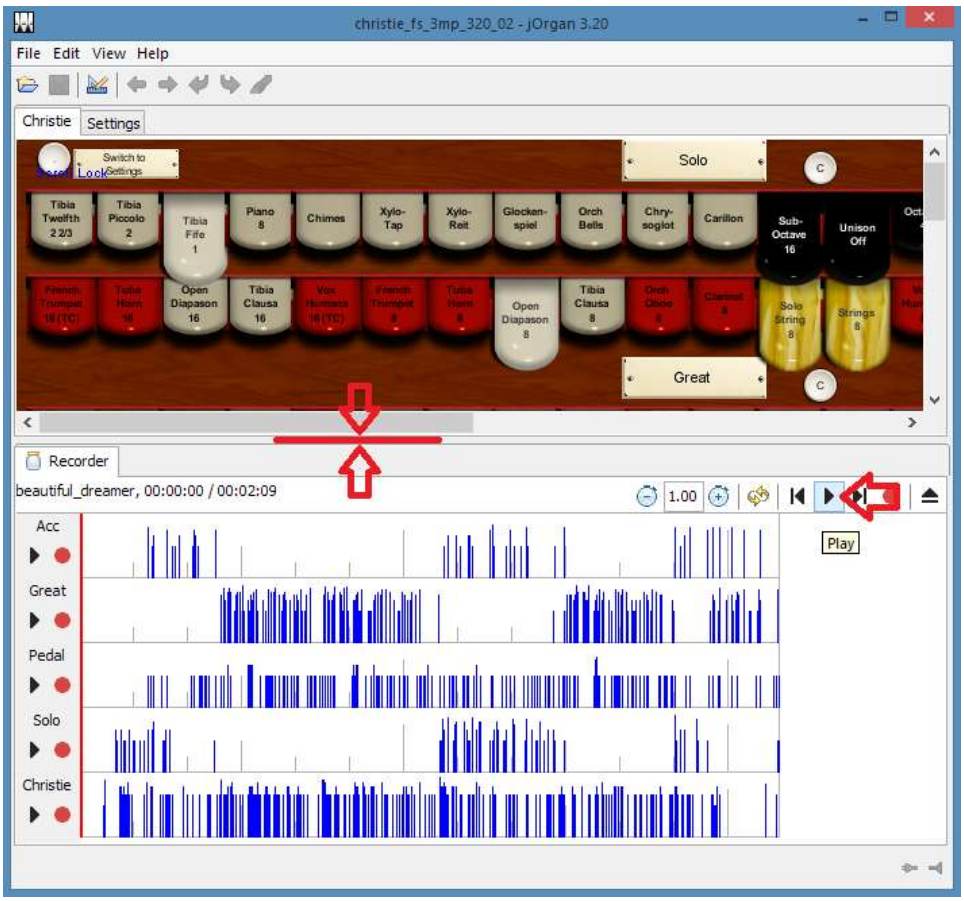
First, ensure you do not have any red dot with an “x” “Problems” showing in the “Problems tab” as we looked at previously. *(It is ok to have yellow triangles indicating no MIDI connections, as you will not need them at this stage.)* You can right-click on the Tab labelled “Problems” and click “Close” to remove it from the window.

To play a file, you first need to activate the Recorder function. *(The recorder buttons on the console will not function until you have accessed the actual “Recorder” Tab.)* If you do not have it showing as a tab toward the bottom of the jOrgan window, go to the “View” drop-down item on the Menu bar and click “Recorder” in the list.



INITIAL STEPS WITH THE “CHRISTIE” DISPOSITION

You will see something like this…



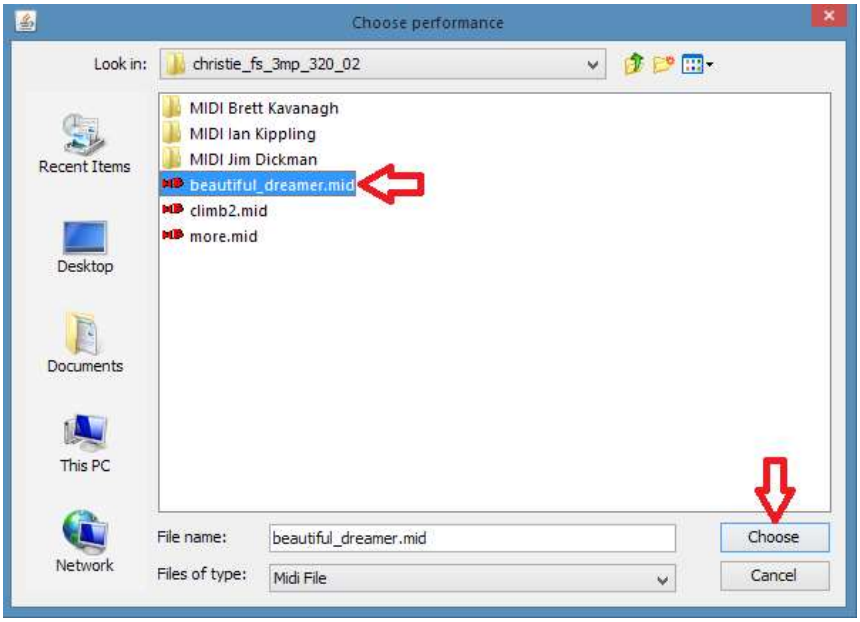
You can see more or less of the “Recorder” section by clicking on the line between the Recorder window and the organ console then dragging it up or down. *(You do not really need to see all that is there unless you are very intrigued or editing the file.)*

If there is a file already loaded, simply click the “Play” button.

If the “Recorder” window is blank, or you wish to load a different file, then you need to click the “Eject Performance” button.

You will see a Windows File Manager window. It will show you "xx.mid" files available in the current folder. It will also show you other folders in the current folder. *(In the case of the Christie folder, the extra folders will also contain "xx.mid" files from other musicians.)*

Click on a file to select it, then click "Choose" in the bottom left corner. *(Or just double click the file name)*



Now you can click "Play".

To watch the performance, you can drag your window to the size and position you want on your screen. You can have the Keyboards showing if you wish as described previously and you will see the notes that are being played, and the tabs changing with combination changes.

You also may need to adjust the program volume as we covered previously in setting the Fluidsynth "Gain"

FULL SCREEN MODE

You can now press the "F11" on your computer keyboard and the display will change into "Full Screen" mode. *Just press "F11" again to get back to the normal jOrgan window where you can access the various function tabs.* In full screen mode, you cannot see the keyboards or the recorder window.

Whilst there are basic recorder functions on the full screen console, they will not work unless you have first activated the Recorder tab.

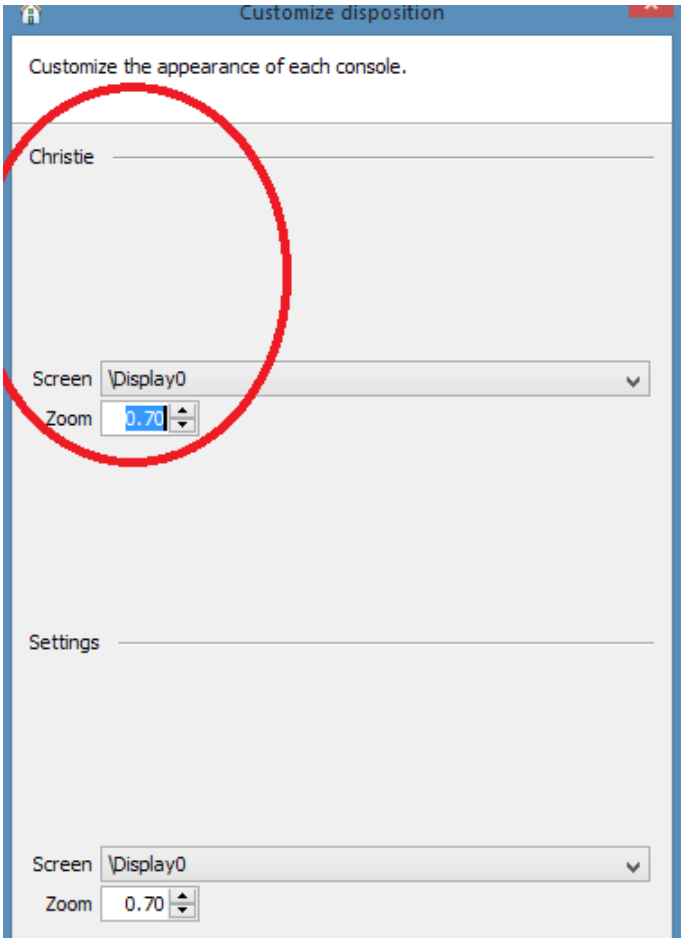
INITIAL STEPS WITH THE “CHRISTIE” DISPOSITION

ADJUST THE CONSOLE SIZE TO BEST FIT YOUR MONITOR

Using the “Customizer” as we discussed previously, the second page allows you to adjust the overall “Zoom” size of the “Christie” console. There is also a setting below to adjust the “Settings” page, which we will cover in a moment.

You can adjust the “Zoom” size higher to see all the tabs larger. If you do this, you will find that as you move your mouse to the edge of the screen it will move the image allowing you to see the obscured parts of the console.

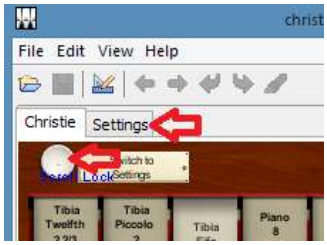
You can adjust the “Zoom” size smaller if you want to see the complete console without scrolling, if the current layout does not suit your monitor size or format. *(The default zoom setting I have used with the “Christie” disposition is designed to suit the 1366x768 resolution of my laptop screen.)*



INITIAL STEPS WITH THE “CHRISTIE” DISPOSITION

THE SETTINGS CONSOLE – RANK LEVELS & REVERB

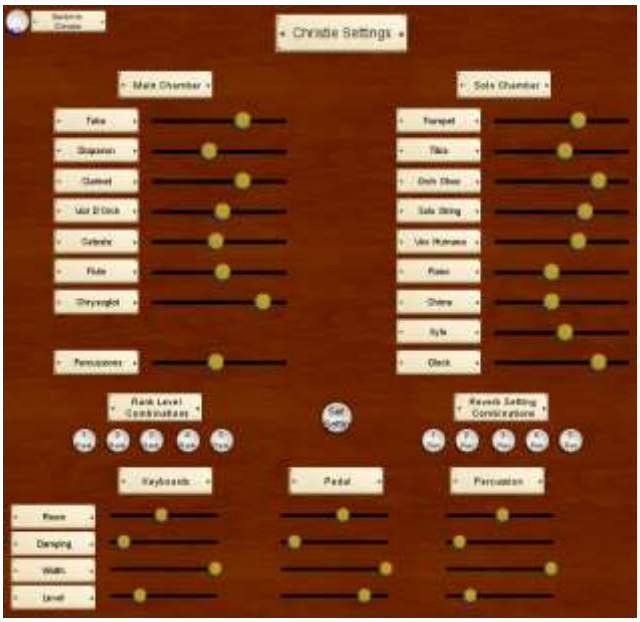
The Settings Console is effectively another page or window with further controls for the “Christie” disposition. The controls you will find on this console allow us to change settings you would not find on the real organ. You can adjust the volume of each rank or type of instrument voice to balance the organ to your taste, and adjust the reverb room characteristics.



You can switch to the settings page by clicking either the settings tab at the top left of the main jOrgan page, or by pressing the button at the top left of the console screen.

The Settings tab is not accessible when in full screen mode, hence the need for a console button.

You will also notice blue text near this console button – “Scroll Lock”. This indicates that a keyboard shortcut has been created for this button, meaning it can be activated using a key on your computer keyboard. From the Settings console, F12 key on your computer keyboard will get you back to the main Christie console (again noted in blue test).



INITIAL STEPS WITH THE “CHRISTIE” DISPOSITION

The slider controls are adjustable using your mouse. The top section of the page has the organ voicing ranks laid out in their chambers, from top to bottom in order of their intensity. The lower section has three banks of reverb settings. This allows you to have different reverb settings for the keyboards, the pedals and the percussion.

The “Room” and “Level” reverb settings are the most noticeable to experiment with.

Between the rank level section and the reverb section are combination pistons. These can independently store the settings of rank balance and reverb settings, allowing you to have different settings for different styles of music and return precisely to a previous setting. We will discuss the use of the combination memories later in this document.

jOrgan Customizer

MIDI DEVICE INSTALLATION IN WINDOWS

At this point, it is important to gain a deeper understanding of how Windows handles MIDI connections and how to check outside of jOrgan that things are installed properly. If your MIDI devices are not correctly installed in Windows, jOrgan will not be able to use them.

A “Device” is a connection made to your computer, in this case bringing MIDI signals into your computer. A single MIDI “device” may bring multiple MIDI keyboards as well as other MIDI functions to the computer, or it may just be a single MIDI keyboard or function. It depends on how your MIDI equipment is wired up.

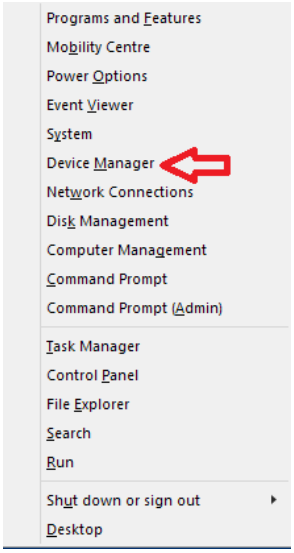
When you first connect each MIDI Device to your computer, it will want to find and load “Device Driver Software”.

The easiest way to check if your MIDI connections are good or bad is to listen to the USB connection sound when you plug your devices in. If you hear a ding, then a higher pitch ding, everything is good. If you hear three lower pitch dongs then there is a problem. (When you disconnect a USB device, you will hear a ding and a lower pitch dong.)

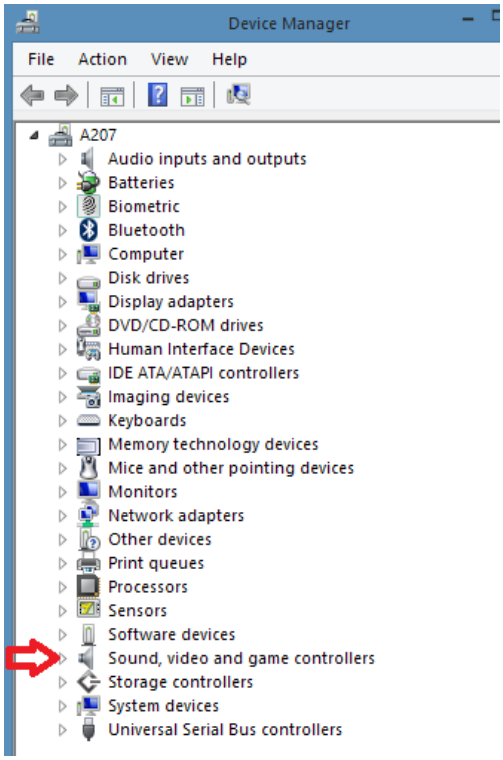
If you plug the same device into a different USB port on a different occasion, Windows will need to find and load the “Device Driver Software” again, so it is best to remember or mark the USB port you use for each device.

Most MIDI devices now use Windows generic MIDI device drivers meaning you do not need a CD containing software, or to find and download driver software from the internet. Some MIDI devices will have specific driver software to provide extra functionality. Windows will tell you if it needs you to show it where the driver files are, or at the very least it will indicate a problem when you view “Device Manager”.

In Windows 8.1, press the Windows key + the “x” key. 



Click on “Device Manager” *or press the “m” key (underlined in the name)*



Now click on the arrow to the right of the “Sound, video and game controllers” line. This will open up more detail for this section.

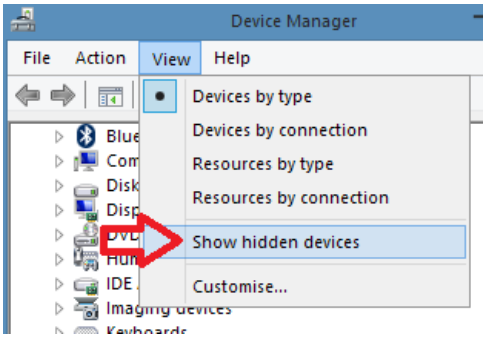
My MIDI console consists of 3x identical Masterkey 61 keyboards (Each have USB MIDI connection to the computer), and 1x Edirol UM-1 MIDI to USB interface (which brings my Pedals, Swell and Pistons into the computer).

In this list, you can see the 3x identically named “masterkey 61” items, and the “UM-1” *(I have marked with red dots)*. You can also see that Windows has some other devices listed here that we do not need to worry about.

If any of the items in this list on your computer has a yellow circle with an exclamation mark in it, it means there is a problem with the installation of that device and it will not be functioning correctly. To correct a problem like this follow these steps in this specific order. Right click on the item, and select “uninstall”. In your next selection box, do not tick the box to delete the driver software from your computer. Un-plug just that one specific device from your computer. Allow at least 15 to 20 seconds, then plug in the device again. This should now trigger Windows to reinstall the driver software. Watch any messages that come up carefully so that, if this fresh install is incomplete, you will have some clues as to what the problem might be.

If you want to see how many multiple driver installations Windows has for your MIDI devices, at the top of the Device Manager window, you can click “View” – “Show Hidden Devices”.

Now when you go back and look at the items in the “Sound, video and game controllers list” you will likely see duplicates of your devices in a lighter grey colouring. (You may want to uninstall these to keep things neat.)



If you are using a laptop computer to run your virtual organ, you should take care in the timing order you plug and unplug your MIDI USB devices in finishing and re-starting your virtual organ session. If you use a desktop computer and/or always leave your MIDI USB devices connected, you don't need to worry. If you do a full "Shut-Down", then when starting a full "Boot-Up" of Windows each time, you also don't need to worry.

If you put your laptop into "Sleep" or "Hibernate" mode before unplugging your MIDI devices, then wake up your laptop without the devices connected (to do other work with your computer), you will find Windows is not very happy that it can't find the MIDI USB devices it thought were connected. You may even get the blue screen of death.

To avoid this problem, follow this sequence when you finish playing your virtual organ.

- Close your jOrgan software
- Unplug your MIDI USB devices
- Put your laptop to "Sleep" or "Hibernate"

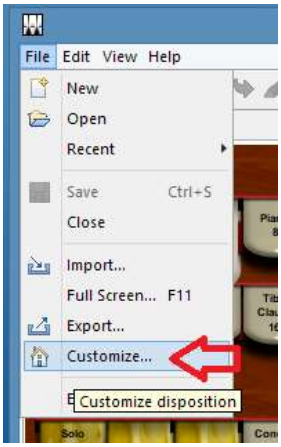
When you start playing your virtual organ

- Start your computer
- Plug in your MIDI USB devices
- Open your jOrgan software

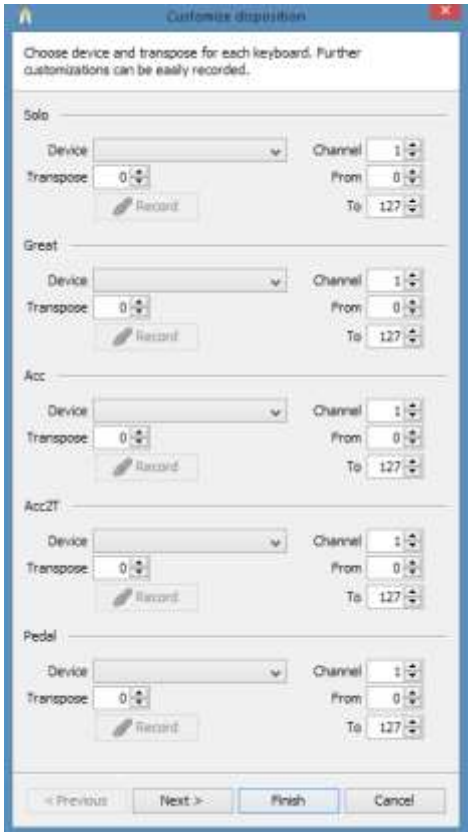
MIDI INPUT SETTINGS IN JORGAN

To play jOrgan as a fully functional Virtual Organ, you will want to connect at least one external MIDI keyboard. *Please make sure you have read through the MIDI Device Installation in Windows section just prior to this before jumping straight into jOrgan MIDI settings.*

To configure a MIDI device in jOrgan it first needs to be installed and correctly recognised in Windows, then open jOrgan. *If it was already open, close and restart jOrgan.*

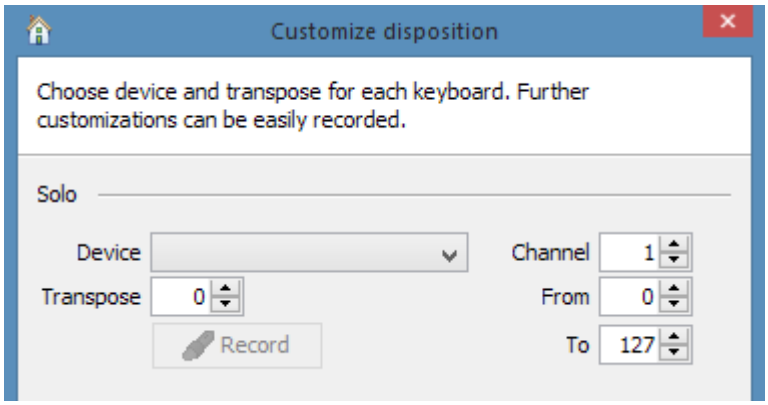


Click File – Customize….



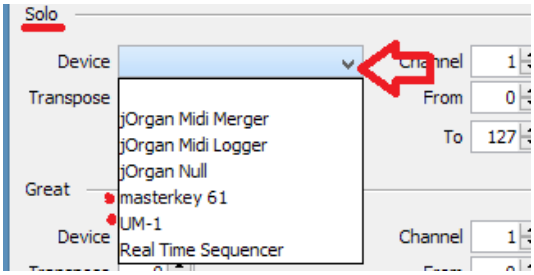
The first page of the Customizer gives you a list of the available keyboard divisions in a jOrgan disposition. Each is presented as an individual item with its own settings.

You can set each of the jOrgan keyboard divisions to use the same single MIDI keyboard, or you can set them up to multiple MIDI keyboards, or a combination of a MIDI organ console and extra MIDI keyboards.



At the top of this list, you will see the Solo division and the various settings relating to it. *The "Christie" disposition has been created to replicate a 3 manual Theatre Organ. The Solo division or manual is the top keyboard in a 3 keyboard stack.*

Click the drop-down arrow at the right of the Device box.



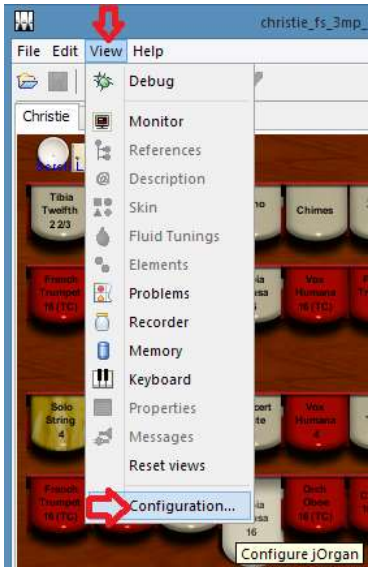
You will see a list of the available MIDI devices visible to the Windows operating system.

ENUMERATE – FOR MULTIPLE IDENTICAL MIDI DEVICES

If you recall back about 3 pages, Windows Device Manager showed I had 3x "masterkey 61" devices and the "UM-1". Here in this list jOrgan is only showing 1x "masterkey 61" and the "UM-1". Because the three devices have the identical name, Java thinks there is only 1x valid device and only displays the one. Thankfully there is a solution to this problem.

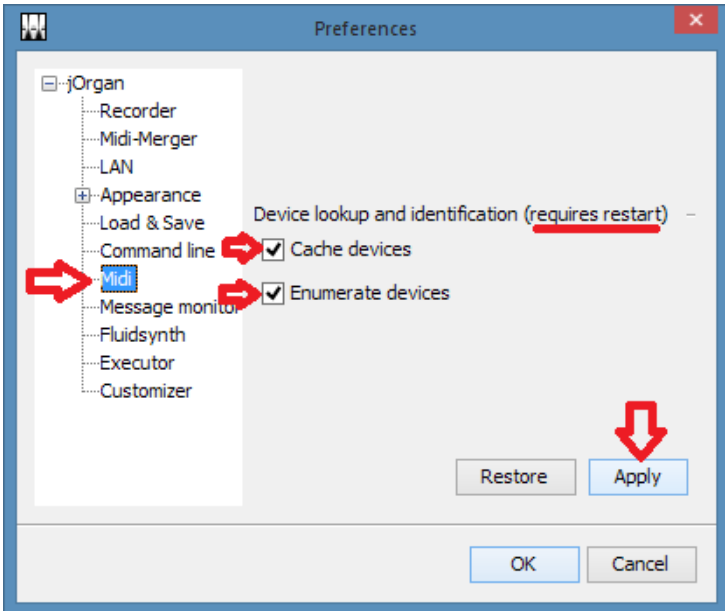
Click "Cancel" or the red "X" on the "Customizer…" window.

Click "View" then "Configuration…"



In the Preferences window, select “Midi” on the left.

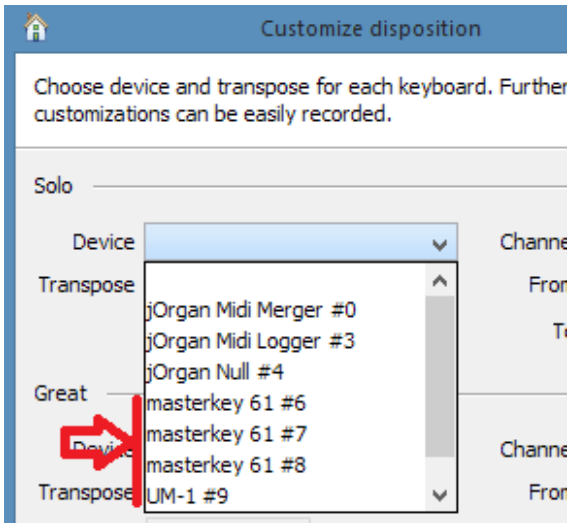
Then tick “Cache devices” and “Enumerate devices”



Note that it says here “requires restart”, so click “Apply” and “OK”, then close the jOrgan program.

Start jOrgan again using the “Christie” disposition as we did back at Run the Christie jOrgan

Go back to “File” – “Customize...” to see the Midi device settings again. This time you should see something like this.



On my system, I now have the 3x “masterkey 61” devices showing. All the MIDI devices in the list have a “# number” beside them. This is the “Enumerate” function that we selected a moment ago.

The “Cache devices” setting lets jOrgan remember your MIDI input devices, even if you start the program without your MIDI devices plugged in (if you are away from your console and just want to play MIDI recorder files for example).

BACK TO MIDI INPUT SETTINGS IN JORGAN

Now in my situation I need to select one keyboard at a time and test to see which one is which in the enumerated numbers. “masterkey 61 #6” happens to physically be the keyboard in my lowest position of the three manuals, so my Accompaniment keyboard.

Each of my three MIDI keyboards default to MIDI Channel 1. This is no problem, because each is selected as a different “device”, they don’t need individual different channel numbers. It would only be if multiple keyboards were connected to the computer through a single “device” that they would need to use different channel numbers.

If you don’t know what MIDI channel your MIDI keyboards and other devices are sending, please read the document in this link.

http://www.tosa-qld.org/VTPO/docs/Simple_MIDI_for_Virtual_Organ.pdf